Open Water Diver Course Instructor Guide

Metric/Imperial Version
1999 Edition

Incorporates all Training Bulletins through Fourth Quarter 2002

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This document is an important component of the PADI Open Water Diver course instructional system. Use this guide with the *Open Water Diver Manual,* Recreational Dive Planner (Table and The Wheel), Lesson Guides, *Open Water Diver Video, Open Water Diver Multimedia* and Aquatic Cue Cards when teaching Open Water Diver courses.

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PADI
Open Water Diver Course
Instructor Guide

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How to Use This Guide

This guide covers the standards, sequencing, recommendations and other information you need to conduct the PADI Open Water Diver and PADI Scuba Diver courses. It consists of four sections (including this one): Course Standards and Overview, Confined Water Dives, Knowledge Development and Open Water Dives.

All required standards, activities and performance requirements for the Open Water Diver and Scuba Diver courses in this text appear in **blue boldface** print. This clearly separates training requirements from supporting rationale, general recommendations and how-to information. Headlines and section titles are in boldface for readability and easy identification only; such a headline or title does *not* mean everything under it is required. Any required standard or activity will *itself* appear in **blue boldface** type. Items not in boldface are recommendations for your information or consideration.

This guide speaks to you, the PADI Instructor. Although PADI Divemasters and Assistant Instructors also use this guide, references to "you" generally mean "PADI Instructor." Here's what you'll find in each section:

Section One

Course Standards and Overview

This section deals with general considerations that relate to conducting the PADI Open Water Diver and PADI Scuba Diver courses. These include:

- course standards
- course structure, rationale and suggested scheduling
- use of training materials, including the PADI *Open Water Diver Manual, Open Water Diver Video, Open Water Diver Multimedia,* Complete System Lesson Guides, Quizzes and Exams
- links to the Discover Scuba and Discover Scuba Diving experiences
- standards and considerations for the Scuba Diver course, experienced divers, and junior (under 15) divers
- administrative requirements, including referrals

Section Two

Confined Water Dives

This section looks at the skills students learn during confined water dives, with a brief explanation of the rationale and philosophy behind each one. The section also discusses the requirements for each confined water dive in the PADI Open Water Diver and Scuba Diver courses. This includes a list of performance and sequencing requirements, as well as recommendations for how to meet these requirements. For practical application purposes this information is also on the PADI Confined Water Aquatic Cue Cards.

Section Three

Knowledge Development

This section details how to guide student divers in efficient and effective learning of the foundational material in each Knowledge Development section. It explains the basis for effective use of PADI course materials, the philosophy behind guiding self-directed learning and how to assess where students need knowledge development assistance. This helps guide your emphasis on the material reviews. It also lists the Knowledge Development performance requirements and explains how students may meet them. The section includes five presentation outlines for use with the Complete System Lesson Guides.

Section Four

Open Water Dives

This section covers the standards and instructional philosophy specific to training entry-level student divers to apply dive skills in open water. The section covers each dive individually, including Open Water Dives 1 - 4, and the Optional Skin Dive. For each dive, you'll find the performance requirements, required sequencing and recommendations for meeting the performance requirements. For practical application purposes this information is also on the PADI Open Water Aquatic Cue Cards.

Dive Today: Open Water Diver, Scuba Diver, Discover Scuba Diving and Discover Scuba

The **PADI Open Water Diver** course integrates with other PADI programs to help you meet changing consumer needs. The philosophy is to give you maximum flexibility in accommodating student time demands and varying learning styles. As you read through this guide, you'll see that you can lead with the dive experience, allowing new divers to Dive Today.

Dive Today is a philosophy that addresses the biggest perceptual obstacle to becoming a diver: that it takes a lot of time before you even "get" to dive. The philosophy is to begin student learning by diving in confined water and open water as early as possible. This not only accomplishes a marketing objective, but assists course educational goals by bolstering student interest and motivation.

Applying the concepts in this guide, you'll be able to take students immediately into Confined Water Dive One after a short briefing, and from there, directly into Open Water Dive 1.

The **PADI Scuba Diver** pre-entry level certification addresses a growing demand for a certification that consumers can earn more quickly, provided the diver dives under professional supervision. The PADI Scuba Diver pre-entry level certification opens the door to a new market of individuals: those with personal time constraints and those who prefer to dive with direct supervision. The PADI Scuba Diver course is a subset of the Open Water Diver course, which permits you to meet this demand *without* stocking an entire array of separate course materials and *without* working a new course into your teaching schedule.

Discover Scuba Diving links directly to the Open Water Diver course. You can accept those who have completed the Discover Scuba Diving experience on a referral basis, crediting these divers as having completed Confined Water Dive One and Open Water Dive 1. This is possible because Confined Water Dive One is the same as the Discover Scuba Diving Water Skills Introduction and Development Session, and the Discover Scuba Diving dive now equals Open Water Dive 1.

Discover Scuba accommodates a wider purpose. Besides offering the flexibility to conduct this program in confined water (not just a swimming pool), you may, at your discretion, conduct Confined Water Dive One as part of the experience. You may credit this as Confined Water Dive One for the Open Water Diver course. You can also credit this as the Discover Scuba Diving Water Skills Introduction and Development Session for the Discover Scuba Diving experience.

The philosophy is to give you maximum flexibility in accommodating student time demands and varying learning styles.

As you go through this guide, you'll find the specifics for how these programs integrate, and suggestions on how you can use them for accommodating your customers' needs.

Bubblemakers
Kids over eight years of age may participate in Discover Scuba as Bubblemakers. The following additional standards apply:

In a pool, the maximum Bubblemaker to Instructor ratio is 6:1 (Assistant Instructor 4:1)

In confined open water, the maximum Bubblemaker to Instructor/Assistant Instructor ratio is 4:1.

Maximum allowable depth for 8-9 year old Bubblemakers is 2 metres/6 feet.

One Course Standards and Overview

PADI Open Water Diver and Scuba Diver Course Structure

The PADI Open Water Diver course teaches student divers the foundational knowledge and skills they need to dive with a buddy, independent of supervision. The Scuba Diver course is a subcourse within the Open Water Diver course that teaches student divers the foundational knowledge and skills they need to dive under the supervision of a certified divemaster, assistant instructor or instructor. Discussions regarding the standards, philosophy and structure of the Open Water Diver course apply equally to the Scuba Diver course, unless otherwise noted.

PADI Open Water Divers are qualified to:

- Dive with a buddy independent of supervision while applying the knowledge and skills they learn in this course, within the limits of their training and experience.
- Obtain air fills, scuba equipment and other services.
- Plan, conduct and log open water no stop (no decompression) dives when properly equipped and when accompanied by a buddy in conditions with which they have training and/or experience.
- Continue their dive training with a specialty dive (Adventure Dive), in the PADI Adventures in Diving program or in PADI Specialty courses.

PADI Scuba Divers are qualified to:

- Dive under the direct supervision of a PADI Divemaster, Assistant Instructor or Instructor while applying the knowledge and skills they learn in this course, within the limits of their training and experience.
- Obtain air fills, scuba equipment and other services when diving under supervision.
- Under supervision plan, conduct and log open water no stop dives (no decompression) only when properly equipped and accompanied by a certified divemaster, assistant instructor or instructor in conditions in which they have training or experience.
- Continue dive training to complete their PADI Open Water Diver certification and certain other courses such as the Project AWARE and Equipment Specialties.

PADI® padi.com Professional Association of Diving Instructors

Part of the PADI Open Water Diver and Scuba Diver courses includes informing student divers that they are responsible for diving within the limits of their training and experience. You may accomplish this by having students read and sign the relevant PADI Safe Diving Practices Statement of Understanding and by explaining to Scuba Divers the limitations of their certification.

The minimum age for Open Water Diver or Scuba Diver certification is 15, which must be reached by the end of the course. You may train individuals under the age of 15 according to the Junior Open Water Diver and Junior Scuba Diver standards covered later in this section. **Student divers in the Junior Open Water Diver and Junior Scuba Diver courses must be 10 years old prior to the start date of the course.**

Performance Based Training

The PADI Open Water Diver course builds upon the concept of *performance-based learning*. This means student divers progress through the course by *demonstrating* that they meet measurable learning objectives. The course's instructional design sequences these objectives from simple to complex, so students build upon previous learning as they progress. Attempting to learn something without mastering prerequisite objectives can complicate and interfere with development and learning. **For this reason, students must satisfactorily demonstrate meeting knowledge development and water skills performance requirements (objectives) in their required sequences.** Satisfactory demonstration is called "mastery," which, along with sequence requirements, is discussed in more detail throughout this guide.

Performance Flexibility

The advantage of using an integrated instructional system is that it provides you flexibility in accommodating learning styles, personal preferences and needs and logistics while maintaining educational validity. As you'll see in the *Dive Today* Learning Pyramids, you have tremendous latitude structuring your courses. Here are some of your options:

1. Lead with diving. You don't have to start student divers with Knowledge Development Section One. You may get them directly into Confined Water Dive One with the Discover Scuba briefing, or with the Discover Scuba Diving briefing.

By doing this, you more accurately position learning to dive as diving, whereas leading with Knowledge Development makes it appear that learning to dive is book work. Getting divers diving gets them excited, which enhances motivation. Motivated students are more likely to complete their independent study, pay closer attention and have more fun.

2. Brief elaborations. Thanks to the effectiveness of independent study with the *Open Water Diver Manual* and *Video* or *Multimedia,* you don't need to lecture for knowledge development. Instead, you can assess learning by reviewing Knowledge Reviews and having student divers complete the quizzes. Elaborate using the Complete System Lesson Guides, emphasizing only those areas that need it or where students express an interest in more detail.

This provides several advantages. For one, it reduces class time and gets the divers diving faster. Second, it gives you more time to help students in other ways, such as assisting them with equipment selection. Third, rather than spend time teaching this basic material, you spend more time applying it to specific student interests, needs and local environments.

3. Independent flexibility. One reason independent study works well is that individuals learn differently. Some people need lots of breaks, whereas others need uninterrupted concentration. Independent study accommodates these differences, meaning your students study more effectively and learn more.

Furthermore, it gives you flexibility. In the *Dive Today* Learning Pyramids, you'll see that you and your students have the option of completing independent study for more than one section at a time. This accommodates unique scheduling opportunities such as weekend courses.

4. Options open. Obviously an instructional system does have some sequencing requirements, which this guide covers in detail. The Open Water Diver Course is so flexible that this guide can't possibly list all the schedule and sequence options, so you may discover possibilities that aren't listed in the *Dive Today* Learning Pyramids or elsewhere in this guide. As long as these meet the particular sequencing required by standards, these options are as valid as those listed. If you have any questions, contact your PADI Office.

Confined Water Dives

Confined water training serves two purposes. First, it establishes the basic skills that all divers need (or may need in the unlikely event of a problem) in a relatively low stress environment. Second, it reinforces and supplements Knowledge Development training by having student divers practice and apply what they learn from reading the manual and watching the videos. There are five Confined Water Dives that correspond to the five Knowledge Development sections.

Accommodating Motor Skill Development Abilities and People with Disabilities.

To earn the PADI Open Water Diver or Scuba Diver certification, student divers must demonstrate mastery of each performance requirement. As in the confined water dives, you have the latitude to accommodate individual needs by modifying techniques to meet requirements. In the open water environment, you may need to assist individuals with physical challenges to accommodate access to boats, shore and other facilities.

Knowledge Development

The Knowledge Development portion establishes a foundation of principles, procedures and general information divers need. There are five sections, each of which is normally accomplished through independent study with the PADI *Open Water Diver Manual* and *Open Water Diver Video*, or with the *Open Water Diver Multimedia*. The students answer exercise questions within the reading, and complete a Knowledge Review for each section that you check for completeness and understanding. Students demonstrate mastery by completing the appropriate PADI Quiz, or, following the fifth section, a comprehensive Final Exam. Then they receive a brief elaboration during which you answer questions and apply the material to specific student needs and local environments. You'll find an outline for your elaboration using the Complete System Lesson Guides in the Knowledge Development Section of this instructor guide. (See the Learning Pyramid.)

In the Knowledge Development section, mastery is defined as exhibiting acceptable performance on the PADI Open Water Diver Course Quizzes before participating in the open water dives. (An exception is that successfully completing the Discover Scuba Diving briefing meets the knowledge development requirements for participating in Open Water Dive 1.) **In addition, the student must exhibit acceptable performance on the final exam prior to certification. The final exam may be administered any time after the final Knowledge Development session.**

Training Materials

You must use the following when conducting the PADI Scuba Diver course or Open Water Diver course:

- **PADI *Open Water Diver Manual* and *Video*, or *Open Water Diver Multimedia*** (if available in a language the student diver understands.)
- **PADI Open Water Diver Quizzes and Exam**

Acceptable performance may be defined as a score of 75 percent or higher. This helps you determine whether to retest a student diver. If a diver scores less than 75 percent, consider a retest, however the certification criteria is performance based. **The student must either score 100 percent initially on the quizzes and exam, or you must review each item missed until the student achieves mastery. You must retain a written record of the Quizzes and Exam, and students must sign and date the student statement at the end of the answer sheet to verify that they reviewed and understand all questions they missed. It is recommended that students also initial missed questions.** (See section Three - Knowledge Development for an explanation of scoring quizzes and exams.)

You have several options in terms of sequencing and integrating Knowledge Development with other portions of the program; the Learning Pyramid section details these.

Open Water Dives

The Open Water Dives complete the integration of the principles learned in Knowledge Development and the skills learned in the Confined Water Dives by having student divers apply both in the open water dive environment. By practicing skills mastered in the Confined Water Dives, students continue to learn as they use these skills in the open water.

The Dive Today Learning Pyramids

The *Dive Today* Learning Pyramid is a visual representation of how to organize and integrate the basic components of the Open Water Diver course. The pyramid graphically represents how learning builds upon itself to create a solid training structure. There are four primary ways you and your students can structure learning. Each of these offer a wide range of flexible scheduling options. All of these draw upon use of the Complete System Lesson Guides to guide your elaborations so you effectively apply the learned material to individual student diver needs and get the students into the Confined Water Dives as efficiently as possible.

When using the Complete System Lesson Guides, it is highly recommended that students study with the PADI *Open Water Diver Manual* and *Open Water Diver Video* or the *Open Water Diver Multimedia*. An exception is if only the *Open Water Diver Manual* (but not the video) exists in a language the student understands. Students must answer all the exercises and Knowledge Reviews during independent study. Students attend instructor-led elaboration and review sessions and complete the appropriate Open Water Diver Quiz and Final Exam.

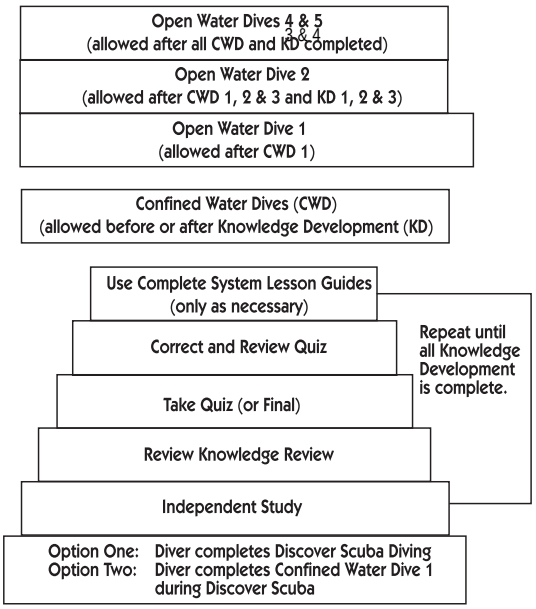
Learning Pyramid Option One

1. Student divers complete Discover Scuba Diving (with you or come to you as referrals).
2. Students complete Knowledge Development Sections One and Two independent study (manual & video/multimedia).
3. Instructor reviews Knowledge Reviews and provides comments/explanations for incomplete or incorrect answers.
4. Instructor administers quiz.

There are four basic learning pyramid options.

- The preferred options One and Two get student divers into the water immediately.
- Option Three is for those situations in which students will complete all independent study ahead of time.
- Option Four is for those circumstances in which students study only with the *Manual* independently.

Pyramid One and Two



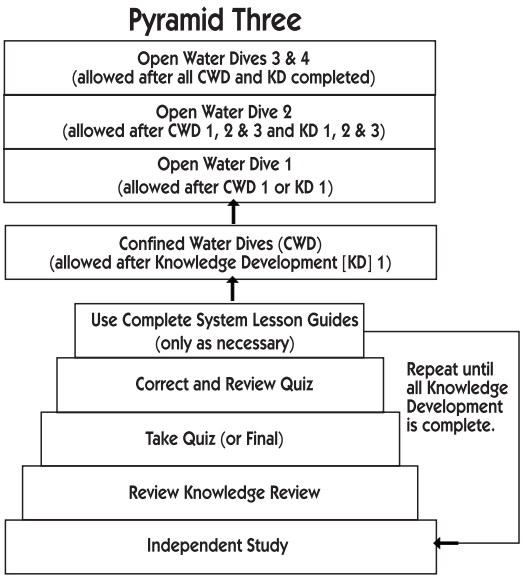
5. Instructor corrects quiz, reviews incorrect responses and answers student questions.
6. Instructor applies appropriate portions of the Complete System Lesson Guides to relate information to local dive conditions, personal interests, etc.
7. Students repeat steps 2-7 for Knowledge Development Sections Three, Four and Five. (Student takes Final Exam instead of quiz for Knowledge Development Section Five).
8. Students participate in Confined Water Dives either before or after Knowledge Development sections.
9. Students complete Open Water Dives 2 through 4. (Note students may complete Open Water Dive 2 after completing Knowledge Development and Confined Water Dives One through Three.)

Learning Pyramid Option Two

1. Student divers complete optional skill requirements for Confined Water Dive One during Discover Scuba (with you or come to you as referrals).
2. Students complete Knowledge Development Sections One and Two independent study (manual & video/multimedia).
3. Instructor reviews Knowledge Reviews and provides comments/explanations for incomplete or incorrect answers.
4. Instructor administers quiz.
5. Instructor corrects quiz, reviews incorrect responses and answers student questions.
6. Instructor applies appropriate portions of the Complete System Lesson Guides to relate information to local dive conditions, personal interests, etc.
7. Students repeat steps 2-7 for Knowledge Development Sections Three, Four and Five. (Student takes Final Exam instead of quiz for Knowledge Development Section Five).
8. Students participate in Confined Water Dives either before or after Knowledge Development sections.

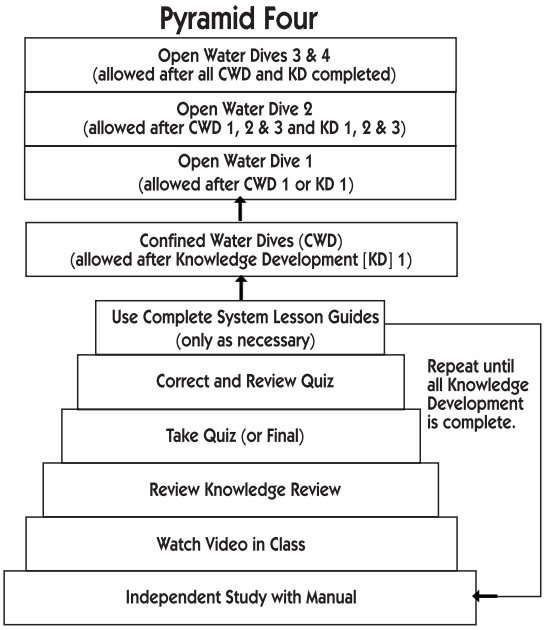
9. Students complete Open Water Dives 1 through 4. (Note students may complete Open Water Dives 1 and 2 after completing Knowledge Development and Confined Water Dives One through Three.)

Learning Pyramid Option Three



1. Students complete Knowledge Development Sections One through Five during independent study (manual & video/multimedia) and all Knowledge Reviews.
2. For each section, instructor reviews Knowledge Reviews and provides comments/explanations for incomplete or incorrect answers.
3. Instructor administers quiz.
4. Instructor corrects quiz, reviews incorrect responses and answers student questions.
5. Instructor applies appropriate portions of the Complete System Lesson Guides to relate information to local dive conditions, personal interests, etc.
6. Students participate in Confined Water Dives.
7. Students repeat steps 2-5 for Knowledge Development Sections Two through Five and completes Confined Water Dives Two through Five. (Student takes Final Exam instead of quiz for Knowledge Development Section Five).
8. Students complete Open Water Dives 1 through 4. (Note students may complete Open Water Dives 1 and 2 after completing Knowledge Development and Confined Water Dives One through Three.)

Learning Pyramid Option Four



1. Students read Section One in the *Open Water Diver Manual* and complete the Knowledge Review.
2. Student watches the *Open Water Diver Video* in class.
3. Instructor reviews the Knowledge Reviews and provides comments/explanations for incomplete or incorrect answers.
4. Instructor elaborates using the Complete System Lesson Guides.
5. Students take quiz for Section One.
6. Instructor corrects quiz, reviews incorrect responses and answers student questions.
7. Students participate in Confined Water Dives.
8. Students repeat steps 2-5 for Knowledge Development Sections Two through Five and completes Confined Water Dives Two through Five. (Student takes Final Exam instead of quiz for Knowledge Development Section Five).
9. Students complete Open Water Dives 1 through 4. (Note students may complete Open Water Dives 1 and 2 after completing Knowledge Development and Confined Water Dives One through Three.)

The PADI Scuba Diver Course

The PADI Scuba Diver course is a subcourse within the Open Water Diver course. It opens diving to those individuals with time constraints, and those interested in diving in groups and tours guided by a certified divemaster, assistant instructor or instructor. It invites these divers to experience diving and encourages them to continue training to the Open Water Diver level and beyond. (See the previously listed limits and qualifications of the PADI Scuba Diver pre-entry level certification on page 1-1.)

You handle the training and certification of PADI Scuba Divers using the standards, recommendations and materials used in the Open Water Diver course. **Students must use and study with the *Open Water Diver Manual* and *Video* or *Multimedia*, the PADI Quizzes and the Complete System Lesson Guides** (or all materials available in a language the student diver understands) **for the PADI Scuba Diver course.**

If no materials exist in a language the student understands, you should elaborate on the necessary information. Students must still complete the Knowledge Reviews and Quizzes (orally is acceptable, with a retained written record in a language the instructor understands).

All standards that apply to student divers in the PADI Open Water Diver course apply to student divers in the PADI Scuba Diver course, with the following exception: Certification as a Scuba Diver requires successful completion of only the first three sections of Knowledge Development (including quizzes), the first three Confined Water Dives and Open Water Dives 1 and 2. Student divers must also successfully complete the Dive Flexible Skills, Snorkel and Regulator Exchange, Tired Diver Tow and Cramp Removal. Students must also read and sign the PADI Scuba Diver Statement prior to certification. All other standards apply. You may certify divers who do not complete all the requirements for the Open Water Diver course, but who meet or exceed the requirements for the Scuba Diver pre-entry level certification, as PADI Scuba Divers. An example of when this might be appropriate is an individual who comes down with a cold after Open Water Dive 3, but before completing Open Water Dive 4 and cannot complete Open Water Diver certification before going on a trip.

Supervising PADI Scuba Divers – Ratios and Depths

PADI Scuba Divers are trained to dive only under the direct *inwater* supervision of a certified divemaster, assistant instructor or instructor. Although similar to PADI Discover Scuba Diving or other "resort" experience participants, PADI Scuba Divers have more theoretical background and better developed water skills, though they have not been trained for independent diving.

Underwater tours (except Discover Local Diving) are not generally PADI programs per se, so no specific standards apply. Divemasters, assistant instructors or instructors leading the tour need to determine appropriate ratios based on the environment, conditions and the PADI Scuba Diver's experience.

PADI Standards do apply if Scuba Divers join a tour of Discover Scuba Diving participants. **In this case, the Discover Scuba Diving ratio of 4:1 applies to the total number of PADI Scuba Divers and DSD participants.***

The PADI Scuba Diver depth qualification is 12 metres/40 feet. It is recommended that guided dives not exceed this depth.

In planning guided dives for PADI Scuba Divers, remember they have no formal training in the use of dive tables or computers. The dive leader needs to watch the dive tables and repetitive no stop limits for PADI Scuba Divers.

***NOTE:**
The maximum instructor-to-student diver ratio is 4:1 during any open water training dive that includes children aged 10-11. No more than two children aged 10-11 may be included in the group of four student divers.

Discover Scuba Diving, Discover Scuba and PADI Seal Team

Credit Toward the Open Water Diver Course

Participation in Discover Scuba Diving, Discover Scuba (with optional skills) or the PADI Seal Team may be credited toward the Open Water Diver course (or Scuba Diver course) requirements at your discretion.

Discover Scuba Diving

Confined Water Dive One and the Discover Scuba Diving Water Skills Introduction and Development session are identical, as are the Discover Scuba Diving tour and Open Water Dive 1. Therefore, and at the instructor's discretion, both may be credited to the Open Water Diver course.

To allow credit, you must be able to verify the diver's participation. Divers need to have the referring instructor who conducted the Discover Scuba Diving experience document that Confined Water Dive One and Open Water Dive 1 have been completed. The Open Water Diver Course Referral Record is ideal for this purpose. You may treat the referral as any other, and accept the diver into an Open Water Diver course, remediating as necessary. Note that the Discover Scuba Diving briefing does not qualify as Knowledge Development Section One, and so the participant must complete it before beginning Knowledge Development Section Two or Confined Water Dive Two.

As mentioned earlier, a student diver who completes Knowledge Development Section One and Confined Water Dive One of the Open Water Diver course has completed the requirements to participate in a Discover Scuba Diving experience dive/Open Water Dive 1, within Discover Scuba Diving standards and recommendations.

See the Discover Scuba Diving Instructor Guide and *Training Bulletins* for more information.

Discover Scuba

Discover Scuba offers an opportunity for credit to the Open Water Diver course. At the instructor's discretion, the session may include all the skills and training from Confined Water Dive One. **This may be credited toward the Open Water Diver course at the instructor's discretion when the diver has proof of participation from the referring instructor who conducted the Discover Scuba experience. The referring instructor documents that Confined Water Dive One has been completed.** The Open Water Diver Course Referral Record is ideal for this purpose. You may treat this referral as any other, and accept the diver into an Open Water Diver course, remediating skills as necessary.

See the Discover Scuba Instructor Guide and *Training Bulletins* for more information.

PADI Seal Team

When a Teaching status PADI Instructor conducts AquaMissions 1-5, or assesses skill mastery during AquaMission 5, the PADI Seal may receive credit for completing Confined Water Dive One. This referral credit is valid for 12 months from the last AquaMission. When youngsters are old enough to continue their training, this can be an important link to the PADI Junior Scuba Diver or Junior Open Water Diver course.

See the PADI Seal Team Instructor Guide and *Training Bulletins* for more information.

The Experienced Diver

The purpose of the Experienced Diver program is to allow you to certify divers who are not certified, but who can provide proof of scuba experience, or to certify divers certified by training organizations other than PADI as PADI Open Water Divers.

Course Prerequisites

Any diver with a scuba certification from a training organization other than PADI may enroll for Experienced Diver certification. In most instances, a continuing education course may better meet the diver's needs.

OR

Any diver who has been diving for a minimum of two years and has proof of 20 or more open water dives, and who has never taken a scuba course, may apply for an Experienced Diver certification.

You may accept properly logged dives or military qualification as proof of experience. Other acceptable proof of dive experience includes a statement witnessed by a certified diver.

Use this certification *carefully* and with *discretion*. As the certifying instructor, you are responsible for the diver's qualification.

Procedures for the Experienced-Diver Certification

To earn the PADI Open Water Diver certification, the Experienced Diver must satisfactorily complete the PADI Scuba Review program, PADI Open Water Diver Course Final Exam, and Open Water Dives 1 through 4 as outlined. You may allow applicants to meet these requirements by participating in the final phase of a regular Open Water Diver course.

Junior Open Water Diver

Certification is open to student divers under the age of 15 through the PADI Junior Open Water Diver and Junior Scuba Diver programs. **To enroll, individuals must be at least 10-years-old prior to the start date of the course.** (See Special Requirements for 10 and 11-year-olds on next page.)

Junior divers must meet all requirements for Open Water Diver or PADI Scuba Diver certification other than age. Certification depends on competency and student ability to understand dive concepts. Students must independently complete *written* PADI Open Water Diver Quizzes and Exams — oral exams are not permitted for divers under the age of 15 (except when diagnosed with a learning disability – see "General Standards and Procedures" for exam policy.) Keep quiz and exam answer sheets as part of each Junior diver's records.

A 12 to 14-year-old Junior Open Water Diver or Junior Scuba Diver is qualified to dive only when accompanied by another certified diver who is of legal age. Since Junior PADI Scuba Divers must dive under the direct supervision of a PADI Divemaster, Assistant Instructor or Instructor, this meets this standard's intent. Legal age is defined as an individual who is at least 18 years of age, except where law defines an older age; in this case, the law becomes the guideline. It's recommended that a legal-aged family member accompany Junior students by taking the course with them.

Junior Open Water Divers or Junior Scuba Divers may upgrade their certification level to PADI Open Water Diver or Scuba Diver when they reach the age of 15 with no additional requirements. (See the Replacement Card Procedures and Upgrade Procedures in the General Standards and Procedures section.) If more than one year has passed since the diver earned the Junior certification, when requesting an upgrade, it is recommended that the diver complete a Scuba Review program.

Special Requirements for 10 and 11-year-olds

- **Prior to the start of a Junior Scuba Diver or Junior Open Water Diver course, you must have both a parent (legal guardian) and the child (aged 10-11) watch the *Youth Diving: Responsibility and Risks* video or thoroughly review the Youth Diving: Responsibility and Risks Flipchart. Both parent and child must read and sign the Youth Diving: Responsibility and Risks Acknowledgment form.**
- **During any confined open water or open water training dive that includes 10 and 11-year-olds, the maximum instructor-to-student diver ratio is 4:1. No more than two children aged 10-11 may be included in the group of four student divers. You may not increase this ratio with the use of certified assistants.**
- **Certification dives for 10 and 11-year-olds must not exceed 12 metres/40 feet.**
- **After certification, a 10 or 11-year-old Junior Scuba Diver or Junior Open Water Diver must dive with a parent, guardian or PADI Professional. Dives must not exceed 12 metres/40 feet.**

Referrals

You may refer a PADI Open Water Diver course student who has completed any Knowledge Development session, Confined Water Dive or Open Water Dive to a PADI Instructor in another location to complete certification requirements. **A Knowledge Development session, Confined Water Dive or Open Water Dive is considered complete when the student diver has demonstrated mastery for all its listed performance requirements.** For example, a student diver may be referred after completing Knowledge Development Section One, which includes independent study, academic review and passing the quiz, or after mastering the skills during Confined Water Dive One, or after completing both.

Treat Scuba Divers wishing to complete training as Open Water Divers as referral students who have completed Confined Water Dives One through Three and Open Water Dives 1 and 2.

It is the responsibility of the PADI Instructor receiving a referred student to ensure that the diver is adequately prepared to participate in the next training step. If, in the PADI Instructor's judgment, the student diver's knowledge or skills do not adequately meet the performance requirements, the student restudies or retrains as necessary to meet the performance requirements.

PADI Instructors may also receive referred students who have started their training (completing knowledge development and confined water training) with a certification organization other than PADI. The procedures for accepting PADI Open Water Diver referrals and referral students from other certification organizations are outlined in this section.

PADI Open Water Diver Course Student Referral Procedures

1. A Teaching status PADI Instructor completes one or more training segments with a student diver. The diver may be referred after successfully completing any Knowledge Development session, Confined Water Dive or Open Water Dive.
2. **The referral begins when the instructor issues a PADI Open Water Diver Referral Record to the student documenting the completed training. The form must list completion dates and be initialed by the instructor. A copy of the student's completed Medical Statement must also be attached, or else the student diver completes a new Medical Statement prior to any inwater activities with the new instructor.** It's also recommended that the referring instructor sign the appropriate segments of the PADI Open Water Diver Training Record sheets in the student diver's log book.
3. **A PADI Open Water Diver Referral Record is valid for 12 months from the last training segment completion date.** However, encourage referred students to complete training as soon as possible.

   You may extend the referral by an additional 12 months by having the student diver complete a new segment of the course, by repeating a previous training segment, or by having the student diver complete a PADI Scuba Review. **Each time a student completes a segment or PADI Scuba Review, another 12 month period begins.**
4. **When receiving a referred diver, the Teaching status PADI Instructor must preassess, and remediate as necessary, student knowledge and skills before continuing training.**

Training must follow an appropriate sequence, as outlined in this guide. Use the PADI Skill Evaluation, *Open Water Diver Manual* and *Video*, *Open Water Diver Multimedia*, *Scuba Tune-up Multimedia* or guidebook to assist with remediation.

5. Prior to participating in any open water dives, referred divers must demonstrate that they can comfortably maintain themselves in water too deep to stand in. This is accomplished as stated in the Water Skills Assessment section of this guide.
6. **The Teaching status PADI Instructor who completes the final Open Water Dive certifies the student. The certifying instructor must ensure that the student meets all certification requirements. Because dive flexible skills may be conducted during any open water dive, the instructor must verify that the student successfully completed all skills. Because waterskills assessment is an exit requirement, the instructor must verify that the student successfully completed the waterskills requirements.**
7. **The certifying instructor submits a PADI Positive Identification Card (PIC) envelope to PADI for processing and retains the completed PADI Open Water Diver Referral Record.** It's recommended, but not required, that the certifying instructor send a copy of the Referral Record to all instructors who participated in the student diver's training.

PADI Scuba Diver Upgrade

PADI Scuba Divers may upgrade to PADI Open Water Divers any time after certification (no time limit) by following referral steps 4, 6 and 7.

PADI Scuba Divers completing training may not have a Referral Record or Card, but should have a PADI Scuba Diver card. Make a copy of the diver's certification card, have the diver complete a Medical Statement, Standard Safe Diving Practices Statement of Understanding and Liability Release (Certificate of Understanding) and Assumption of Risk Agreement, then complete the appropriate referral steps.

PADI Referral Card

The Referral Card is a convenient way to refer students and acknowledge them for completing all coursework leading up to the open water dives. On lightweight cardstock, the card is clearly identified as a *Referral Card* to distinguish it from certification cards.

Issue a Referral Card only after successful completion of *all* confined water dives and knowledge development for the PADI Scuba Diver or Open Water Diver Courses (including all required watermanship and knowledge assessments). The Referral Card must not be used to represent partial completion of confined water dives and knowledge development. The card is designed for student divers who are fully prepared to continue on to open water training.

Because dive flexible skills can't be tracked on the wallet-sized Referral Card, student divers should complete all of their open water dives at the same location and with the same instructor or dive operation. **Student divers who break up the open water dives among different dive operations must supplement the Referral Card with alternate sources of documentation such as the PADI Open Water Diver Course Record and Referral Form or log book.**

As a courtesy to the student diver, it's recommended that the referring instructor contact the receiving instructor, when possible, to outline the diver's performance, ask about local training and costs and to inquire about medical requirements. Advise students traveling abroad to contact the receiving instructor about medical requirements regardless. In some countries, Medical Statements signed by a doctor are *required* for any level of diver training, even if the student checks "no" on all places on the Divers Medical Questionnaire portion. Also, referred students need to understand that the initial course fee does *not* cover any costs for the services of an instructor in another location.

All PADI Instructors involved in the referral process must retain a copy of all administrative paperwork, including the PADI Open Water Diver Referral Record, signed Medical Statements, Standard Safe Diving Practices Statement of Understanding and Liability Release (Certificate of Understanding) and Assumption of Risk Agreement. If necessary, have the diver complete the requirements with you.

Accepting Referral Students From Certification Organizations Other Than PADI

You may complete training for referred entry-level students from certification organizations other than PADI by using the following procedures:

1. **The Teaching status PADI Instructor receiving the student:**
   - **Reviews the referral document to verify that the student has completed the knowledge and skill development portions of an entry-level scuba course.**
   - **Verifies that the student has completed a water skills assessment (at least a 200 metre/yard swim or 300 metre/yard mask, snorkel, and fin swim and a 10 minute tread/float).**
   - **Verifies that the training completion date listed on the referral document is not older than 12 months.**
2. **The student completes a PADI Medical Statement, Standard Safe Diving Practices Statement of Understanding, and Liability Release (Certificate of Understanding) and Assumption of Risk Agreement.**
3. **The receiving Teaching status PADI Instructor ensures that the student successfully completes the entire PADI Scuba Review program (refer to the Experience Programs Instructor Guide in this Manual) along with the PADI Open Water Diver Final Exam.** Remediate the student's knowledge and skills, as necessary, before any open water training occurs.
4. **Use the PADI Skill Evaluation to assess student skills. In addition to the skills listed on the PADI Skill Evaluation**

Grade Sheet, the student must also demonstrate mastery of the following skills:

- **Underwater swim without a mask**
- **Air depletion exercise**
- **Air depletion/Alternate Air Source (AAS) combined exercise**

5. **A student referred from a certification organization other than PADI must complete Open Water Dives One and Two for Scuba Diver certification, or One through Four for Open Water Diver certification.** For instructional consistency, it's recommended that the receiving instructor/dive center conducting the preassessment and required remediation complete the open water training.
6. **Students may be referred any time between Open Water Dive 1 and Open Water Dive 4. Issue a PADI Open Water Diver Referral Record, along with other referral documentation attached when referring students between open water dives. Preassessment and remediation, as necessary, is required before any open water training occurs.**
7. **The Teaching status PADI Instructor who completes the final open water dive certifies the student. The certifying instructor submits a PADI Positive Identification Card (PIC) envelope to PADI for processing. The certifying instructor retains the student's referral documents along with a signed Medical Statement, Standard Safe Diving Practices Statement of Understanding and Liability Release (Certificate of Understanding) and Assumption of Risk Agreement.**

Open Water Diver Certification Referral Credit

Referring PADI Instructors and PADI Dive Centers and Resorts may receive a credit equivalent to one PADI Open Water Diver certification for every two referrals they issue. **To receive credit, a PADI Instructor conducts all Knowledge Development sessions, Confined Water Dives and water skills assessments for referred students. The instructor submits a Training Completion Form to the appropriate PADI Office to receive referral credit. The form must list the PADI Instructor's name and member number, along with the PADI Dive Center/Resort name and store number (if applicable) to receive their credit.**

PADI Instructors may apply this credit toward a PADI Specialty Instructor, Master Scuba Diver Trainer, IDC Staff Instructor or Master Instructor rating. A maximum of 50 Open Water Diver certifications via referral credit may apply to the Master Instructor rating. For PADI Dive Centers or Resorts, referral credit may apply toward requirements for either 5 Star or Gold Palm Resort status. A maximum of 50 Open Water Diver certifications of the 100 total certifications required for 5 Star status can come from referral credits.

Paperwork and Administration

The following list identifies all the required and recommended paperwork for the Open Water Diver and Scuba Diver courses. The PADI Student Record File combines many of these and is the convenient and recommended means of storing student documents. Items in blue boldface are required; items in plain face are highly recommended. **Keep these documents on file for at least seven years, or as required by your PADI Office or local laws, whichever is longest.**

1. **Liability Release (or Certificate of Understanding) and Assumption of Risk Agreement must be signed by the student at the start of the course.** Exceptions exist when this is prohibited by local laws.
2. **Medical Statement and Divers Medical Questionnaire signed by the student. If the student checks "yes" to any item on the statement, a physician must approve the student for diving before they participate in any inwater training by signing the complete Medical Statement, which you keep in the student's file.** Medical requirements may vary from country to country; consult your PADI Office.
3. **Standard Safe Diving Practices Statement of Understanding signed by the student.**
4. Knowledge Reviews for each Knowledge Development section signed by the student. **(This is required for the Scuba Diver course.)**
5. Quiz for each Knowledge Development section signed by the student, with student initials by missed questions. **(This is required for the Scuba Diver course.)**
6. **Final Exam signed by the student,** with student initials by missed questions.
7. Dates of completion for Knowledge Development, Confined Water Dives and skills, Open Water Dives and referral issue dates, initialed by instructor and student diver.
8. **If referring or receiving a referred student, copies of all required documentation.**

KEY STANDARDS —

Open Water Diver and Scuba Diver Courses

Prerequisite certification: **none**

Minimum age: **15 (10 for Junior Divers)**

Recommended course hours: approximately 31 (19 for Scuba Diver), based on a class of 10 students

Minimum open water training: **4 open water scuba dives (2 for Scuba Diver),** Optional Skin Dive, Recommended Adventure Dive

Student Diver-Instructor ratio: **8 students to 1 instructor (8:1) or 12 maximum with two certified assistants. ***

Minimum Instructor rating: **Underwater Instructor**

***NOTE:** The maximum instructor-to-student diver ratio is 4:1 during any confined open water or open water training dive that includes children aged 10-11. No more than two children aged 10-11 may be included in the group of four student divers.

Certification Procedures

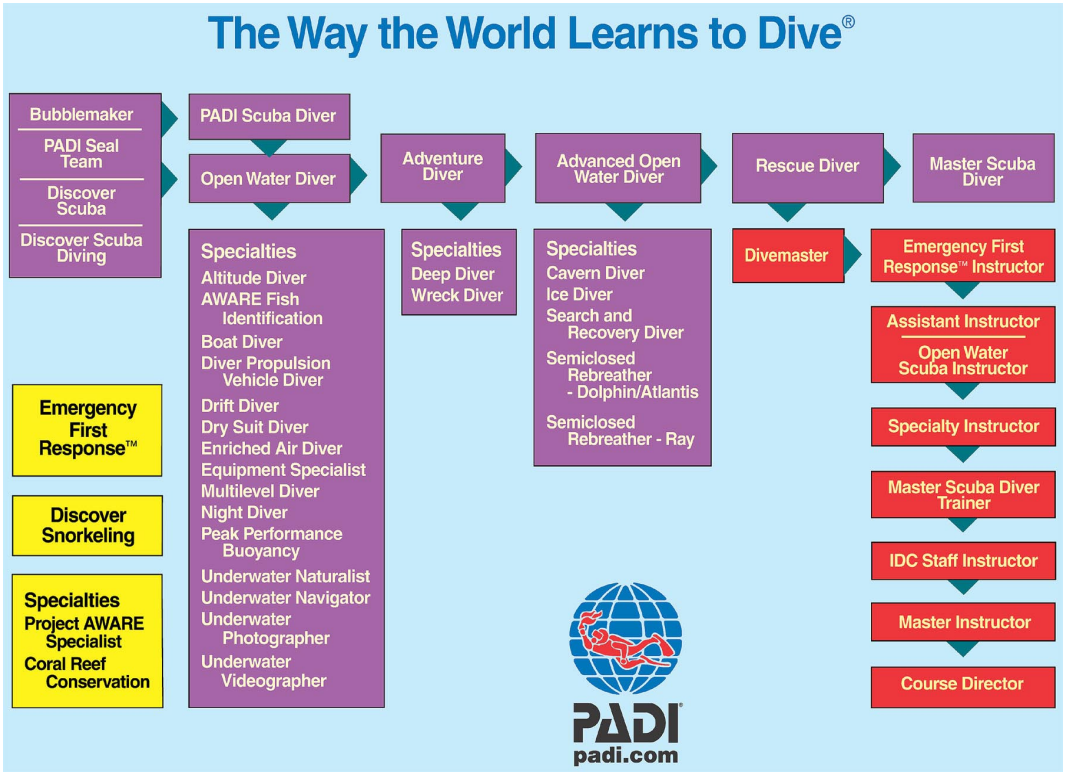
The certifying instructor obtains Open Water Diver and Scuba Diver certifications by submitting completed and signed PICs to PADI. The instructor who conducts the student's final open water dive certifies the diver and signs the PIC. The instructor certifying the student must ensure the student meets all certification requirements.

Adventure Dive

After students successfully complete Open Water Dive 4, you can get them excited about underwater activities, the Adventures in Diving program and PADI Specialty Diver courses. **To accomplish this, after students complete all requirements for PADI Open Water Diver certification, you may conduct a specialty Adventure Dive from the Adventures in Diving program as a third training dive of the day. At your discretion, student divers may credit this dive toward Adventure Diver or Advanced Open Water Diver certification and/or the appropriate specialty.**

To qualify for credit in the Adventures in Diving program and/or the appropriate specialty:

1. **Brief the dive according to the guidelines in the Adventures in Diving Program Instructor Guide and/or the Standardized Specialty Course Outline.**
2. **Conduct the dive according to the Adventures in Diving Program Instructor Guide and/or the Standardized Specialty Course Outline.**
3. **Student divers log the dive for your signature.**
4. **Students complete all prerequisites for the Adventures in Diving Program for your review and to file in their student record files.**



Two Confined Water Dives

In organizing and conducting the confined water dives, perhaps the most important principle is that *it's diving — what students sign up for.* Student divers are excited about diving, and your confined water dives provide their first taste of it. Making confined water dives fun, exciting experiences that exceed expectations is important for a students motivation and enthusiasm — and it may determine whether students *continue diving* after the course, much less whether they continue their dive education. Besides opening the door to the dive experience lifestyle and setting the stage for student motivation, the Confined Water Dives begin skills development and continue knowledge development by giving students opportunities to apply what they have learned. The skill sequencing in the Open Water Diver course follows the principles of instructional system design, arranging skills introduction to accommodate the need for prerequisite skills mastery, student motivation, readiness, repetition and practice.

Conduct and Standards

Confined Water Dive One

At your discretion, divers entering the Open Water Diver course may do so by crediting experience they gain in the PADI Discover Scuba or Discover Scuba Diving programs. It is your responsibility to ensure these student divers are adequately prepared for the next training segments. If not, remediate them as necessary.

Prior to Confined Water Dive One, students complete either the Discover Scuba briefing, the Discover Scuba Diving Instructor Presentation, or Knowledge Development Session One. Getting student divers into the water quickly enhances their motivation to learn. It's recommended that you get Open Water Divers and Scuba Divers into the water by using the Discover Scuba/Discover Scuba Diving briefing to move into Confined Water Dive One, with Knowledge Development Session One following the first confined water dive.

Confined Water Dives Two through Five

Knowledge development for these sessions may precede or follow the confined water dives.

As listed in the Confined Water Dives section of this guide, each dive has a list of skills and performance requirements, along with recommendations for meeting these requirements. Student divers learn these skills in stages:

- Often (but not necessarily) with a preview in the *Open Water Diver Video* or *Multimedia*.
- You brief the students about the skill, reinforce its value and make sure they understand what they're trying to accomplish.
- You demonstrate the skill one or more times, as required.

- Students practice the skill.
- You repeat demonstrations, giving direction and solving problems as necessary until students demonstrate mastery.

During the Confined Water Dives, mastery is defined as performing the skill so it meets the stated performance requirements in a reasonably comfortable, fluid, repeatable manner as would be expected of an Open Water Diver. A student who manages to meet the stated performance requirements in such a way that it raises a question as to whether the student could reliably perform the skill for multiple repetitions has *not* met the definition of mastery. Beginning student divers need not perform a skill with the polish expected of a divemaster, but should practice until you are confident they can perform the skill reliably.

During training, students must receive their initial skills training directly from a Teaching status PADI Instructor. The only exception is that renewed (and insured, where required) PADI certified assistants are authorized to conduct the skin diving skills segment of Confined Water Dive Four. After the initial skills training, you may permit further skills development under the supervision of a certified assistant. You may also permit a PADI Assistant Instructor to present the initial skills training under your direct supervision (so you can make corrections, additions, etc. as need be).

A Teaching status PADI Instructor must conduct the final evaluation to verify that students have mastered each skill (with the exception of Confined Water Dive Four, skin diving skills that may be evaluated by a qualified PADI certified assistant.) When having certified assistants work with skill development (such as when a student has a difficulty), be certain the assistants understand that *you* must make the final evaluation before the student moves on.

After demonstrating mastery, allow further skills practice, such as during free time in the Confined Water Dives. Repetition builds ability and aids in remembering how to do the skill. Generally, the more repetition, the better students perform in the Open Water Dives. One technique for adding repetition after demonstrating initial mastery is for certified assistants to have student divers repeat previously learned skills while you work with individual divers who are practicing new skills.

Confined Water Dive Ratio

The maximum inwater ratio for confined water scuba training is 10 student divers per Teaching status PADI Instructor, with a certified assistant required for every four additional students.

Confined Open Water for 10 and 11-year-olds

When using confined open water instead of a pool, the maximum student diver-to-instructor ratio is 4:1 if 10 or 11-year-olds are participating. No more than two children aged 10-11 may be included in the group of four student divers.

Note: Student divers who complete either the Discover Scuba briefing or the Discover Scuba Diving Instructor Presentation are considered as participants of those respective program for the purpose of determining ratios for Confined Water Dive One. See program guides for details.

Recommendations

The goal of confined water dives is to provide the skills base for making the transition to Open Water Dives. With this in mind, it's recommended that you simulate open water diving as much as possible when conducting the confined water dives. Begin with the first confined water dive and accustom students to open water diving throughout. This is more effective than trying to handle it all in the last session.

1. *Make it fun.* Student divers learn better, learn faster, face challenges with more enthusiasm and fall in love with diving immediately if they have fun. How you accomplish this depends a lot on your personal style, but humor, good natured games and similar methods make learning entertaining as well as relevant. Simple ideas motivate students, such as giving them snapshot cameras to play with during skill development "free" time, or having someone video tape their confined water dives to watch afterward.
2. *Tell students you're helping them learn open water dive habits.* It's important that student divers understand that they're developing habits for open water conditions. When they understand this, they actively take part in learning. If they're not aware of this goal, your directions to "not hang on to the pool side" or "keep your mask on" may seem arbitrary or as creating a difficulty for no particular reason. Remind students what you're trying to simulate as you direct and correct. Statements such as "the ocean isn't as flat and calm as this, so let's make a habit of keeping our masks on and our snorkels in our mouth" benefit learning much more than directives to keep masks on and snorkels in.
3. *Have student divers use all the equipment they'll use in the open water.* This acclimates them to the equipment. If conditions require full exposure suits with hoods, you may want to reduce task loading by starting with less and increasing it so that they're in full equipment by Confined Water Dive Three.
4. *Enforce the buddy system.* Ask students to stay within touching distance of their buddies at all times. You can make a game of it by recording "violations" and offering a prize to the individual(s) with the fewest buddy team "violations" during confined water dives.

Instructor Sequenced Skills

Waterskills Assessment

At some point prior to certification the instructor must document that Open Water and Junior Open Water Diver candidates complete a:

1) 200 metre/yard continuous surface swim and a 10-minute swim/float without using any swim aids.

OR

2) 300 metre/yard swim with mask, snorkel and fin and a 10-minute swim/float without using any swim aids.

If confined water conditions require students to do this wearing a buoyant exposure suit, students must weight themselves for neutral buoyancy. Scuba Divers must complete the 10-minute swim/float only. All students must demonstrate that they can comfortably maintain themselves in water too deep to stand up in prior to Open Water Dive 2.

An easy way to have student divers accomplish this is to have them complete the 10-minute swim/float before Open Water Dive 2.

An individual needs to be able to swim and be reasonably comfortable and proficient in the water to dive. Advise people who appear weak and uncomfortable in the water to improve through lessons or practice before engaging in dive training. Advise those with marginal water skills to practice and strengthen their skills for participation in the open water dives.

Be careful to avoid rigorous swim tests, such as endless laps for no purpose. These reduce student enthusiasm and motivation, and for the purposes of the Open Water Diver and Scuba Diver courses, play no relevant

role in evaluating waterskill ability. The overall objective is for you, the instructor, to use discretion in achieving the safety goal of assuring that student divers have reasonable swimming ability while keeping the experience enjoyable and rewarding.

Equipment Assembly and Disassembly

Performance Requirements:

1. **Before the end of Confined Water Dive Three, the student will correctly assemble and disassemble the scuba unit three or more times, with little or no assistance during the last assembly and disassembly.**
2. **Before the end of Confined Water Dive Five, the student will correctly assemble and disassemble the scuba unit five or more times, including the three required before Confined Water Dive Three, with little or no assistance during the last three assemblies and disassemblies.**
3. **Before the end of Confined Water Dive Three, the student will demonstrate the proper post dive care of scuba equipment (some simulation permitted as described under Recommendations for Training).**
4. **During confined water dives the student will have streamlined, secured equipment.** The intent is to ensure that student divers learn to properly set up equipment to eliminate unnecessary drag and reduce damage to the aquatic environment.

You need to ensure that the student diver can properly assemble and disassemble equipment prior to certification.

Recommendations for Training

1. Performance Requirements 1 and 2 give you flexibility in where and when you have student divers practice equipment assembly and disassembly, while ensuring adequate repetition and practice distribution through the course. You may have students assemble equipment during the confined water dives, during the Knowledge Development sessions or during a combination of these. It's recommended that you introduce assembly/disassembly by first demonstrating, then have students assemble/disassemble twice in a row. Distribute the remainder of the assembly/dissassembly practice as logistically advantageous while meeting the performance requirements. If feasible, it's recommended that repetitions exceed the minimums listed.
2. It's important that student divers demonstrate that they know how to properly rinse and maintain dive equipment. In the interest of customer service, many dive centers handle equipment cleaning and maintenance of training/rental equipment. This is entirely appropriate and *is not* in conflict with instruction. Therefore, if advantageous for customer service, to meet this performance requirement you may have students *simulate* rinsing and maintaining equipment by disassembling the equipment, replacing dustcaps, etc. Although they may not actually rinse gear, have students hold equipment and show you (physically) what they would do to care for their equipment. Students should demonstrate — not simply tell you — what they would do. You may do this as part of a Knowledge Development Elaboration and Review or as part of a Confined Water Dive.

Confined Water Dive One

Overview

Don and adjust equipment
Inflate/deflate BCD at surface
Breathing underwater
Regulator recovery
Regulator clearing
Clearing a partially flooded mask
Underwater swimming
Submersible pressure gauge use
Alternate air source use
Hand signals
Ascents
Fun and skill practice
Exit and debrief

Performance Requirements:

By the end of this confined water dive, the student will be able to:

1. **Don and adjust mask, fins, snorkel, BCD, scuba and weights with the assistance of a buddy, instructor or certified assistant.**
2. **Inflate/deflate a BCD at the surface using the low pressure inflator.**
3. **In shallow water, demonstrate proper compressed-air breathing habits; remembering to breathe naturally and not hold the breath.**
4. **Clear a regulator while underwater using both the exhalation and purge-button methods and resume breathing from it.**
5. **In shallow water, recover a regulator hose from behind the shoulder while underwater.**
6. **In shallow water, clear a partially flooded mask while underwater.**
7. **Swim underwater with scuba equipment while maintaining control of both direction and depth, properly equalizing the ears and mask to accommodate depth changes.**
8. **While underwater, locate and read the submersible pressure gauge and signal whether the air supply is adequate or low based on the gauge's caution zone.**
9. **In shallow water, breathe underwater for at least 30 seconds from an alternate air source supplied by another diver.**
10. **While underwater, recognize and demonstrate standard hand signals.**
11. **Demonstrate the techniques for a proper ascent.**
12. Student time for fun and skill practice.
13. Exit and debrief.

Recommended Training Sequence:

(with suggested techniques for accomplishing performance requirements)

1. Briefing
2. Equipment preparation — You or the staff may set up scuba units in advance, or conduct assembly practice, depending on how you plan to meet equipment assembly/disassembly requirements.
3. Mask defogging — Explain various techniques to the students at water's edge.
4. Water entry — Have students enter shallow water without their scuba equipment.
5. Don gear and weights — With buddies assisting each other and with staff help, have students don their equipment while standing in shallow water. Check that masks, fins, snorkels, weight belts, etc. fit properly.
6. BCD inflation/deflation — Demonstrate the function of the BCD in shallow water using low pressure inflation. Also, demonstrate proper positioning for complete deflation.
7. Introduction to scuba — Have student divers sit or kneel in shallow water and breathe slowly and deeply. Allow ample time for student divers to become accustomed to breathing before proceeding to other exercises. For many this is a new sensation — give them time to enjoy it.
8. Regulator clearing — Demonstrate and have students practice both exhalation and purge-button methods. Stress the importance of exhaling (making an *Aaahhh* sound/ blowing continuous bubbles to ensure an open airway) any time the regulator is out of their mouth.
9. Regulator recovery — Demonstrate and have students practice both the arm-sweep and reach methods. Stress proper body positioning to find the second stage. You may combine this exercise with regulator clearing.
10. Mask clearing — Demonstrate and have students practice clearing a partially flooded (below eye level) mask. Stress proper head position (looking up, or down with purge valve) and continuously exhaling through the nose.
11. Swimming underwater — Demonstrate, in shallow water, the flutter kick and have students practice this. Stress proper leg/fin position and a slow, wide kick cycle. Allow students time to practice swimming underwater. Aid those with physical challenges in effectively using special kicks, arms, etc. for underwater propulsion.
12. Equalization and underwater swimming — Have students practice equalization techniques while they swim slowly from shallow to deep water , and return to shallow.
13. SPG use and hand signal recognition — While underwater, use hand signals to ask students how much air they have and to give you an answer. Establish the habit of using hand signals and expecting a reply.
14. Ascents — Have students practice the components of the ascent — signal, swim up slowly, look up/reach up/turn, inflate BCD at surface.
15. Use of an alternate air source (breathing for not less than 30 seconds) — Demonstrate and have students practice locating, securing and breathing from an alternate air source in a stationary position. You may have students secure your alternate air source, or you may have students alternate as donors and receivers.
16. Time for fun and skill practice — Allow sufficient time for divers to have fun enjoying being underwater, practicing skills, etc. Use games that add to the fun of diving while developing student skills and underwater experience.
17. Exit — Have students remove their gear in shallow water and place it on the pool's edge prior to exiting water.

NOTE: When logistics permit, student divers may progress directly to Open Water Dive 1 without exiting the water.

18. Equipment disassembly and care — Staff may handle for students, or you may have students do this, depending on how you plan to meet equipment assembly/disassembly requirements.
19. Debriefing — Debrief students on their performance and counsel individuals as needed.

***Students must meet each performance requirement in Confined Water Dive One before participating in Confined Water Dive Two or Open Water Dive 1.**

Confined Water Dive Two

Overview

Predive safety check
Deep water entry(s)
Snorkel clearing – blast method
Snorkel – regulator exchange
Descents
Surface swimming with scuba
Mask removal, replacement and clearing
No mask breathing
Disconnect low pressure inflator
BCD oral inflation and deflation at the surface
Proper weighting
Air depletion exercise
Fun and skill practice
Weight removal at the surface (quick release)
Equipment removal at surface and exit

Performance Requirements:

By the end of this confined water dive, the student will be able to:

1. **Perform the predive safety check.**
2. **Demonstrate appropriate deep-water entry(s).**
3. **Clear a snorkel of water by using the blast method and resume breathing through it without lifting the face from the water.**
4. **Exchange snorkel for regulator and regulator for snorkel repeatedly while at the surface without lifting the face from the water.**
5. **Swim a distance of at least 50 metres/yards at the surface, while wearing scuba and breathing through the snorkel.**
6. **Demonstrate a descent using the appropriate five step method.**
7. **Completely remove, replace and clear the mask of water while underwater.**
8. **Breathe underwater for not less than one minute while not wearing a mask.**
9. **Demonstrate the response to a leaking low pressure inflator by disconnecting the low pressure hose from the inflator mechanism in shallow water (either underwater or at the surface.)**
10. **At the surface in water too deep to stand in, orally inflate a BCD to at least 1/2 full and then fully deflate it.**
11. **Adjust for proper weighting, which is defined as floating at eye level at the surface with an empty BCD and while holding a normal breath.**

12. **React to air depletion by giving the out-of-air signal in water too deep to stand up in.**
13. Student time for fun and skill practice.
14. **Demonstrate an ascent using the appropriate five step method.**
15. **Remove weights at the surface with minimal assistance using the weight system's quick release mechanism.**
16. **In water too deep to stand up in, remove the weights, scuba unit and fins (if necessary), then exit using the most appropriate means. (Buddy assistance may be provided.)**

Recommended Training Sequence:

(with suggested techniques for accomplishing performance requirements)

1. Briefing
2. Equipment preparation — You/the staff may set up scuba units in advance, or conduct assembly practice, depending on how you plan to meet equipment assembly/disassembly requirements.
3. Donning scuba equipment — Have students don their tanks while seated on the edge of the pool deck. Assistance may be provided, preferably by the buddy.
4. Predive safety check — After students suit up, demonstrate and have students practice the memory device Begin (BCD ok) With (weights ok) Review (releases) And (air ok) Friend (final ok).
5. Suggested entry — controlled seated entry — Have student divers don masks and fins while seated and get them to enter the water (have students avoid hitting pool edge with ends of tanks). Explain that this is suitable for entering water from a low, stable platform in either shallow water, or water too deep to stand up in.
6. Snorkel breathing and clearing — While in shallow water, demonstrate and have students practice filling and blast clearing their snorkels. Students should develop airway control sufficient to enable them to keep their faces in the water while breathing. Stress proper snorkel positioning and proper airway control. After ample practice, have students swim at least 50 metres/yards to simulate a surface swim to a dive site. Stress proper body positioning (head up to keep snorkel out of water, arms at sides) and a slow, relaxed pace (fins below the surface).
7. Snorkel/regulator exchange — While in shallow water, demonstrate and have students practice exchanging the snorkel for the regulator and back again.
8. Five point descent — In water too deep to stand up in, demonstrate and have students practice five point descent.

Descent

1. Signal buddy
2. Orient yourself
3. Snorkel/regulator exchange
4. Note time/start timer
5. Deflate BCD and equalize while descending

9. No-mask breathing (for not less than one minute) — Demonstrate and have students practice breathing underwater without a mask while seated or kneeling in shallow water. Stress airway control and through-the-nose exhalation (tell students not to pinch their noses).
10. Mask replacement underwater — Demonstrate and have students practice the complete removal, replacement and clearing of their masks while seated/kneeling in shallow water. Allow students to proceed from a partial clear first, if desired. Stress proper positioning of mask. This exercise may be conducted in conjunction with the one minute no mask breathing skill.
11. Disconnect low pressure inflator hose – Have students respond to a stuck inflator by disconnecting the low pressure inflator

hose from the BCD. To simulate the stuck inflator, you may have students hold the inflator button down with one hand while disconnecting the hose with the other. Students reconnect the hose after the exercise so they are able to power inflate their BCDs.

12. BCD oral inflation – Demonstrate and have students practice inflating their BCDs at the surface. Emphasize releasing the deflate button when not blowing into the BCD to keep air from escaping.
13. Proper weighting — At the surface and in water too deep to stand up in, demonstrate and have students practice proper weighting for neutral buoyancy. If students do this with full cylinders, then add weight to compensate for air used during the dive — typically about 2 kg/5 lbs for a single cylinder.
14. Air-depletion exercise — Simulate air-supply depletion to allow student divers to experience the sensation of a gradual increase in inhalation effort. Brief students on what will occur and how to signal you when inhalation requires increased effort. Begin by moving in front of the student and slowly turning off the valve until the student feels the depletion occur. Maintain contact with the student's tank valve and restore air supply immediately upon the out-of-air signal.
15. Weight removal — In water too deep to stand up in, have students remove their weights and ideally, have them drop them as in an emergency. If this isn't possible (such as damage to pool bottom), have them hand their weights to you or an assistant, or place them on the pool deck or in a float, etc. Students using weight systems should use the system's quick-release mechanism in shallow water. You may reduce the amount of weight in the weight system if necessary for logistical purposes.
16. Five point ascent — Building on ascent training from the previous confined water dive, have students go the five points of an ascent:

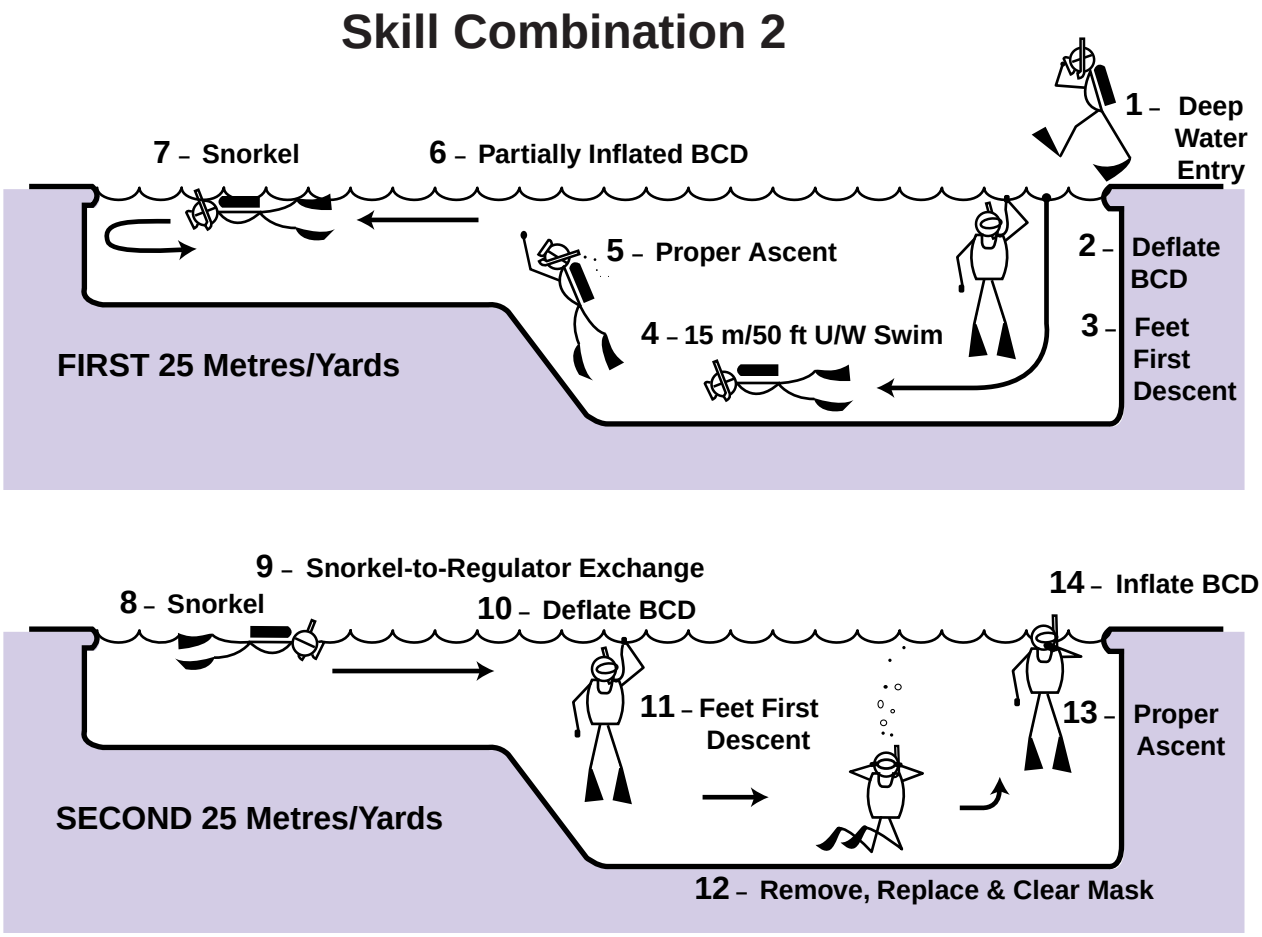
Five Point Ascent

1. Signal buddy — wait until instructor signals
2. Note time
3. One hand over head, other on BCD control
4. Look up
5. Swim up slowly while rotating

17. Deep water exit — In water too deep to stand up in, demonstrate and have students practice exiting from the water. Stress removal of weights first, then scuba and fins if necessary. Students climb from the water or use fins as propulsion to "pull and kick" out of water. Buddy assistance is allowed.
18. Donning scuba and weights — Have students don their equipment and repeat the predive safety check. Stress buddy assistance.
19. Deep-water entry — recommended, giant stride. Demonstrate and have students practice entry. Stress checking entry area, holding mask, signaling OK upon entry, and swimming clear of area. Explain that this is common entry from charter dive boats.
20. Fun and Skills Practice — Plan sufficient time for games, practice exercises and remedial training. You can do this by having students complete Skill Combination Two — treat it as a game; avoid making it seem like a drill or exercise. One method is to give students your Aquatic Cue Card with the combination printed on it, and have buddy teams pass it back and forth underwater to see what to do next as they run through the combination.
21. Exit Water — Have students repeat the deep-water exit for practice.
22. Equipment Disassembly — Either disassemble scuba units for students or conduct disassembly practice depending on how you plan to meet the assembly/disassembly requirements.
23. Debriefing — Debrief students on their performance and counsel individuals as needed.

*** Students must meet the performance requirements of Confined Water Dive Two before participating in Confined Water Dive Three.**

Confined Water Dive Two



Confined Water Dive Three

Overview

Neutral buoyancy, fin pivot oral and low-pressure inflation

Neutral buoyancy swim

Cramp removal

Tired diver tow

Air depletion/alternate air source combined exercise

Free flow regulator breathing

Controlled emergency swimming ascent (CESA)

Fun and skill practice

Exit and debrief

Performance Requirements:

By the end of this confined water dive, the student will be able to:

1. **Independently establish neutral buoyancy under water by pivoting on the fin tips, or, when appropriate, another point of contact (both oral and low-pressure inflation).**
2. **Swim at least 10 metres/yards underwater while maintaining neutral buoyancy.**
3. **Demonstrate the cramp removal technique.**
4. **At the surface in water too deep to stand up in, perform a tired diver tow for 25 metres/yards.**
5. **Respond to air depletion by signaling out of air, then securing and breathing from an alternate air source supplied by a buddy for at least one minute while swimming underwater.**
6. **Share air with another diver using an alternate air source, acting as a donor.**

NOTE: Student divers who act as an alternate air source donor in the air depletion exercise or during the Confined Water Dive One alternate air source breathing skill have completed this requirement.

7. **Breathe effectively from a free-flowing regulator for not less than 30 seconds.**
8. **Simulate a controlled emergency swimming ascent by swimming horizontally underwater for at least 9 metres/30 feet while continuously exhaling by emitting a continuous *aahhh* sound.**
9. Time for fun and skills practice.

Recommended Training Sequence:

1. Briefing
2. Equipment assembly
3. Donning scuba — Stress an increasing degree of independence, allowing for buddy assistance. Do not allow one buddy to do everything for another.
4. Predive safety check — Have buddy teams perform with minimal direction from you or staff.
5. Deep-water entry — Have buddy teams enter at the deep end, descend and swim to the shallow end. Stress maintaining the buddy system. The method of entry is your choice; suggest using method planned for open water dives.

6. Neutral buoyancy underwater — In water too deep to stand up in, demonstrate and have students practice the fin pivot (both oral and low-pressure inflation with BCD or dry suit, if used). Divers adjust their buoyancy so they pivot up and down on their fin tips, or, when appropriate, another point of contact, as they inhale and exhale. Stress that students must not hold their breath. This exercise also develops the underwater BCD oral inflation skill. Remind students to blow bubbles when the regulator isn't in their mouth and to release the exhaust valve when not exhaling into the BCD.
7. Neutral buoyancy swim – After students attain neutral buoyancy, have them swim underwater remaining neutrally buoyant at least 10 metres/yards. Emphasize that they're simulating swimming over a reef and that they must avoid contact with the pool bottom or sides. This helps develop both neutral buoyancy and awareness for the environment.
8. Cramp removal — Demonstrate and have students practice the procedure for removing a leg cramp. Students stretch the "cramped" calf muscle by pulling the fin tip toward the body.
9. Tired-diver tow (for at least 25 metres/yards) — In water too deep to stand up in, demonstrate and have students practice the tired-diver tow by using the tank valve tow, the modified tired-swimmer carry or other appropriate method. Stress that the tired diver should be positively buoyant.
10. Air depletion/alternate air source combined exercise — In water too deep to stand up in, close the "out-of-air" student's valve. When student feels air loss (should *not* watch SPG), student signals out-of-air and secures buddy's alternate air source and begins breathing. Reopen the valve as student secures the buddy's alternate so the regulator is available for use. Donor and receiver swim together with receiver using alternate air source for at least one minute. Switch roles so all divers act as donors and receivers.
11. Free-flow regulator breathing (for not less than 30 seconds) — Demonstrate and have students practice how to breathe from a free-flowing regulator while seated or kneeling in shallow water. Stress that students should not seal their lips around the mouthpiece. Students can use their tongues as splash guards to prevent choking on water.
12. Controlled emergency swimming ascent (CESA) (swimming horizontally, then diagonally for a distance of at least 9 metres/30 feet) — In shallow water, demonstrate the proper technique for executing a controlled emergency swimming ascent. Stress retaining the second stage, extending the head, hand on BCD exhaust valve for control and exhaling continuously, for example, by making an *aaahhh* sound. Student divers practice in the shallow end by swimming horizontally. Next continue practice in the deep end with students making a diagonal ascent to the shallow end. For realism, it's recommended that you have student divers orally inflate their BCDs when they reach the surface to simulate out of air. Reinforce that divers may also establish buoyancy at the surface by dropping their weights.
13. Fun and Practice — Plan sufficient time for practice exercises, games and remedial training.
14. Exit Water — Method at your discretion. Suggest using the method students will use during Open Water Dives.
15. Equipment Disassembly
16. Debriefing — Debrief students on their performance and counsel individuals as needed.

***Students must meet the performance requirements for Confined Water Dive Three prior to participating Confined Water Dive Four and before participating in Open Water Dive 2.**

Confined Water Dive Four

Overview

Skin Diving Skills

Hyperventilation

Surface dives

Ascent and snorkel clearing

Skill Combination 4

Scuba Skills

No mask swim

Neutral buoyancy – hovering

Buddy breathing

Fun and practice

Exit and debrief

Performance Requirements:

By the end of this confined water dive, the student will be able to:

Skin Diving Skills

(May be conducted by a renewed (and insured, where required) PADI certified assistant.)

1. **Demonstrate proper hyperventilation when skin diving.**
2. **Make a vertical dive from the surface in water too deep to stand up in (without excessive splashing or arm movement).**
3. **Clear and breathe from a snorkel upon ascent.**

Scuba Skills

4. **Swim underwater without a mask for a distance of not less than 15 metres/50 feet, and replace and clear the mask underwater.**
5. **Using buoyancy control only, hover without kicking or sculling for at least 30 seconds.**
6. Buddy breathe sharing a single air source for a distance of at least 15 metres/50 feet under water both as a donor and a receiver (optional skill).
7. Time for fun and practice.

Recommended Training Sequence:

(with suggested techniques for accomplishing performance requirements)

1. Briefing
2. Equipment assembly and donning — Don skin diving equipment only.
3. Surface dives (skin diving) — In water too deep to stand up in, demonstrate and have students practice surface dives using either the tuck or pike technique. Stress proper body positioning and efficiency to enable descent without excessive effort. Tell students to remember to

look up, reach up, then come up. Have buddies use the *one-up-one-down* technique.

4. Snorkel clearing — Demonstrate and have divers practice clearing the snorkel by using either the displacement or blast method depending on snorkel design. Exposure to a variety of snorkels and both snorkel clearing methods is recommended. This exercise may be conducted as part of the surface dive, or separately.
5. Skill Combination Four — Demonstrate this skill combination and have students make a game of completing it.
6. Exit and don scuba — Provide minimal assistance. Have buddy teams conduct the predive safety check.
7. Entry — Your discretion. It is suggested that you use this opportunity to demonstrate and have students practice any unique entry techniques, such as a backward roll entry off a boat.
8. No-mask swim (for not less than 15 metres/50 feet) — Have students descend and remove masks. Allow students to become reaccustomed to no-mask breathing while in a stationary position. Once they become comfortable, have students swim underwater without their masks. Encourage students to open their eyes. (Provide proper warning for contact lens wearers to keep their eyes closed.) Buddies may take turns being guide (with mask) and guided (without mask).
9 Buoyancy control (hovering for at least 30 seconds) — In water too deep to stand up in, demonstrate and have student divers practice hovering using only buoyancy control (no arm or fin use). Stress use of breath control to make final adjustments, but avoid breath holding. An orientation device, such as a stationary line, may help students determine whether they're rising or sinking.
10. Buddy breathing — optional skill — (while swimming underwater for at least 15 metres/50 feet) — In the shallow end, demonstrate techniques that are to include proper signaling, maintaining contact, donor control, breath cycle, the need to exhale (make an *aaahhh* sound) when the regulator is out of the mouth and coordination of movements while swimming. Allow practice in the stationary position before proceeding to swim. Have students practice as both donors and receivers of air.
11. Fun and Skills Practice — Plan sufficient time for practice exercises, games and remedial training.
12. Exit — The exit method is at your discretion.
13. Equipment Disassembly
14. Debriefing

Skill Combination Four

Totals of skills performed for Skill Combination:

1. 100 metre/yard swim
2. 50 metre/yard surface snorkel swim
3. Four surface dives
4. 15 metre/50 foot underwater swim
5. Four ascents
6. Four snorkel clears

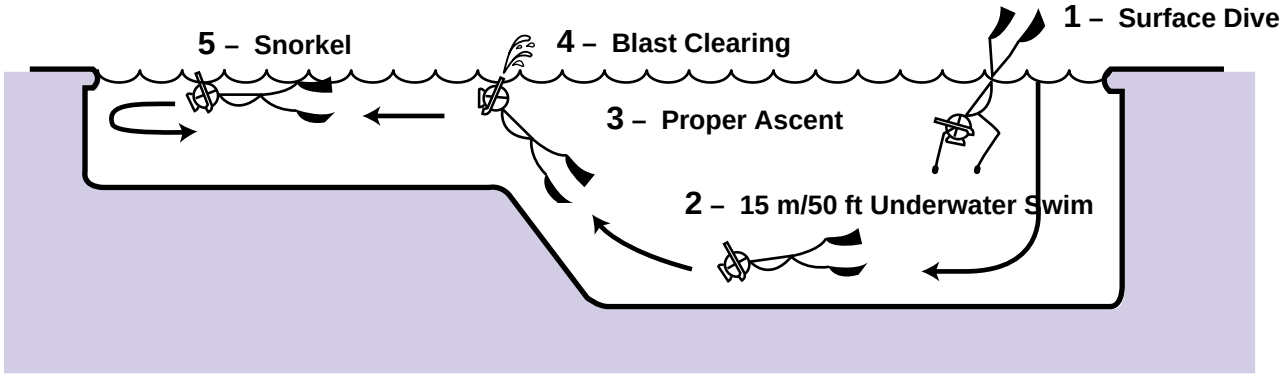
Third 25 metres/yards: Repeat first 25 metres/yards.

Fourth 25 metres/yards: Repeat second 25 metres/yards.

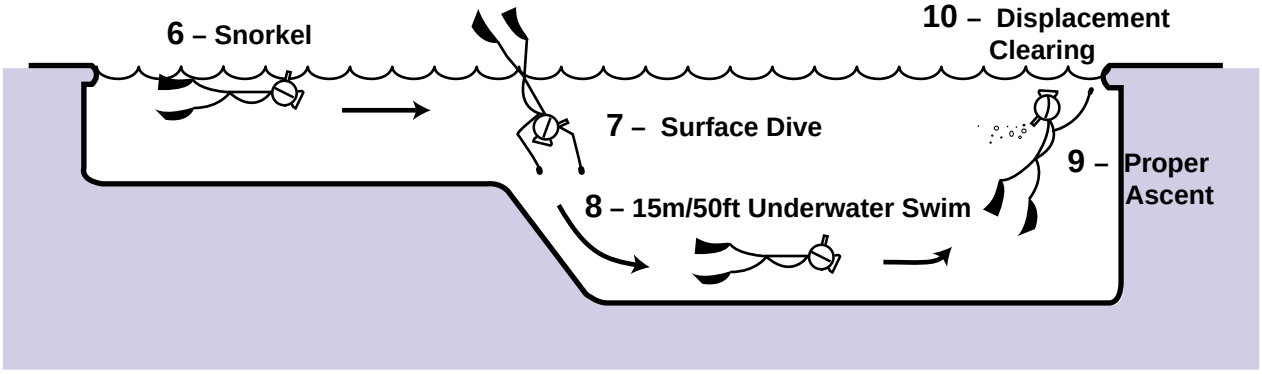
***Students must meet the performance requirements of Confined Water Dive Four before participating in Confined Water Dive Five.**

Skill Combination 4

FIRST 25 Metres/Yards



SECOND 25 Metres/Yards



Confined Water Dive Five

Overview

Scuba unit and weight removal and replacement underwater

Scuba unit and weight removal and replacement at the surface

Fun and practice – Skill Combination 5

Exit and debrief

Performance Requirements:

By the end of this confined water dive, the student will be able to:

1. **Remove, replace, adjust and secure the scuba unit on the bottom, with minimal assistance, in water too deep to stand up in.**
2. **Remove, replace, adjust and secure weight belt on the bottom in water too deep to stand up in, or for students using weight integrated BCDs or weight harness systems, in shallow water, remove weights while underwater.**
3. **Remove, replace, adjust and secure the scuba unit and weights at the surface, with minimal assistance, in water too deep to stand up in.**
4. Time for fun and practice.

Recommended Training Sequence:

1. Briefing
2. Equipment assembly, donning and entry — Have students assemble and don their equipment with buddy assistance, perform the predive safety check and enter water. Provide minimal direction, but oversee to provide assistance as needed.
3. Removal and replacement of scuba unit (underwater) — On the bottom, demonstrate and have students practice the removal/replacement technique most appropriate for their gear. Stress that the unit must not be inflated and that they might need to do much of the skill by feel. If student divers use the overhead donning method, avoid arm/hose entanglement. Allow buddy assistance only if required.
4. Removal and replacement of weight system (underwater) — For students using a conventional weight belt, demonstrate and have students practice removing and replacing their weight belt on the bottom in water too deep to stand in. Stress a firm grasp to avoid dropping, leaning forward to put the weight on the back, releasing the buckle by feel, pulling the belt clear of the body, donning by rolling or holding the belt in a loop and buckling by feel. Permit buddy assistance only if necessary.

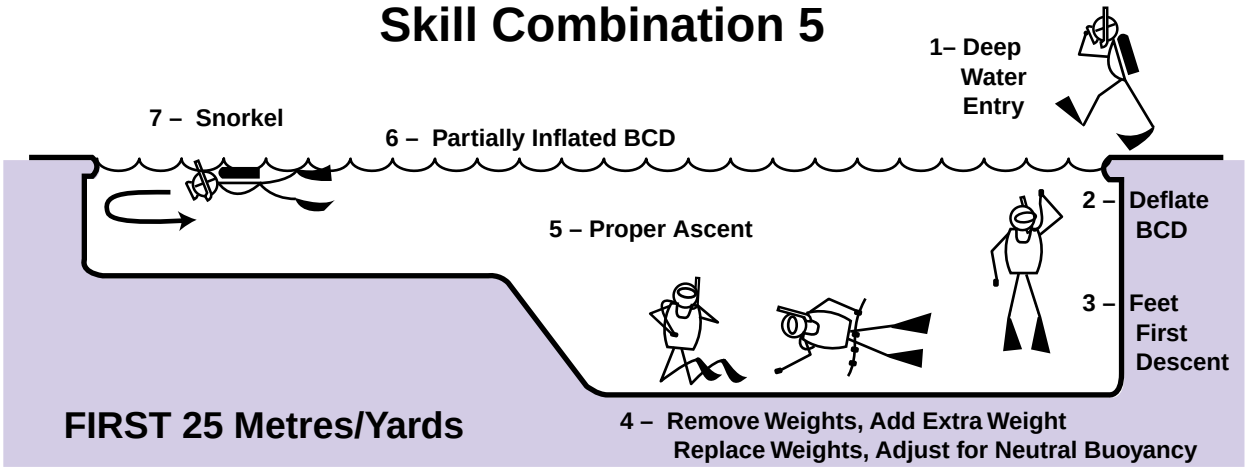
   For students using weight integrated BCDs or weight harness systems, demonstrate and have students practice dumping their weights in shallow water. Accomplish this by pulling the emergency quick release for the system. Demonstrate and have students practice reassembling their weight system at the surface. It's recommended

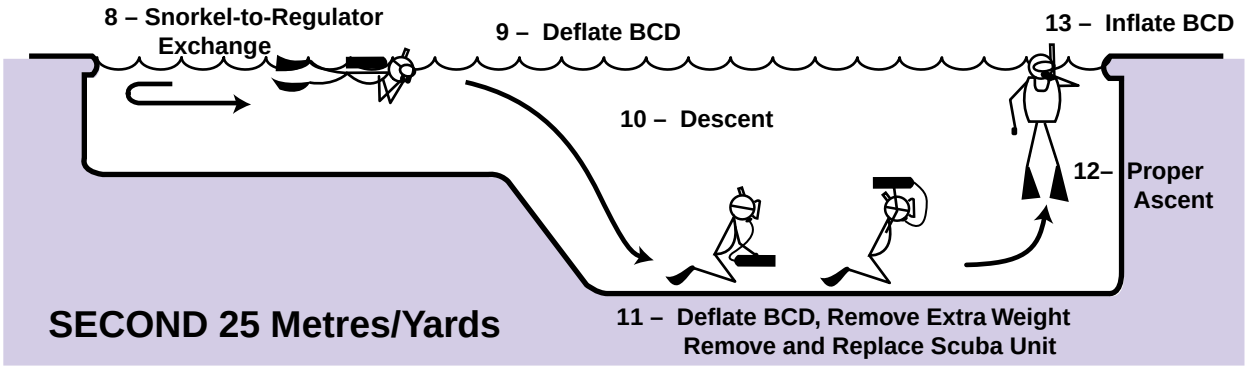
that you also have students practice with a conventional weight belt. While there are various weight systems available, the conventional belt is still the most widely used, especially in rental equipment.

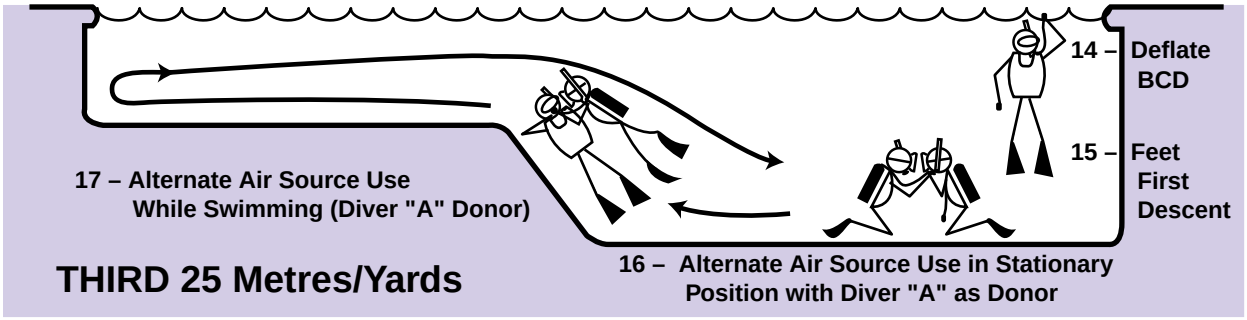
5. Skill Combination Five — Have students run through Skill Combination Five as a game.
6. Removal and replacement of weight system (surface) — Demonstrate and have students practice removing and replacing their weight systems at the surface in water too deep to stand up in. With weight integrated BCDs, weight removal and replacement occurs with removal and replacement of scuba unit (next exercise).
7. Removal and replacement of scuba unit (surface) — Demonstrate and have student divers practice removing and replacing their scuba units at the surface in water too deep to stand up in. Use the technique most appropriate for their gear. Snorkels or regulators may be used. Be sure unit has enough buoyancy to provide support once it has been removed, especially with weight integrated systems (but don't over inflate). Because students have not removed their weight belts, caution them not to let go of the unit after they remove it. Allow buddy assistance only if required.
8. Fun and skills practice — Plan sufficient time for practice exercises, games and remedial training. The emphasis in this confined water dive is practicing and polishing skills, so plan a significant portion of the session for this practice. This is a good time to let students play with single use waterproof cameras or other underwater accessories suitable for confined water use.
9. Exit — The exit method is at your discretion.
10. Equipment disassembly
11. Debriefing — Debrief students on their performance and counsel individuals as needed. Be sure to provide necessary information on the upcoming open water dives.

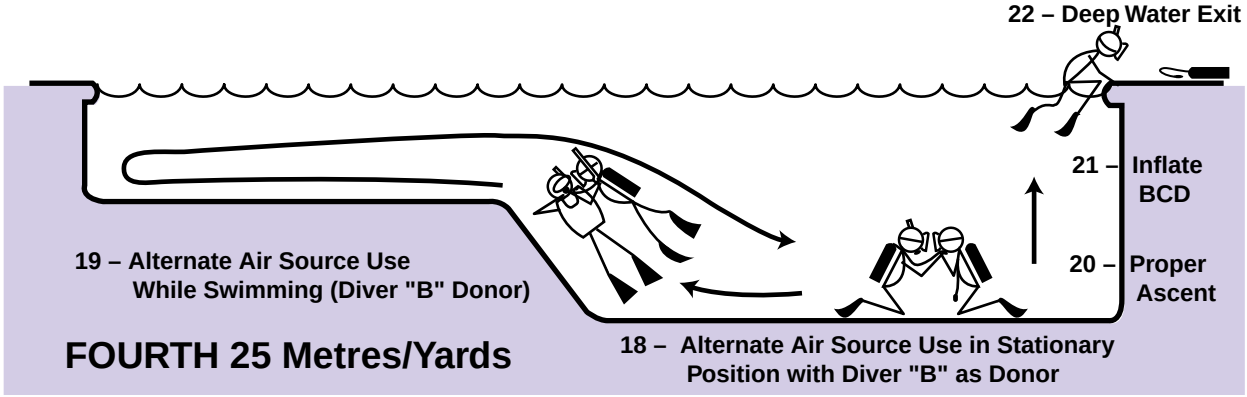
***Student divers must meet the performance requirements for Confined Water Dive Five prior to participating in Open Water Dives 3 and 4.**

Skill Combination 5









Three Knowledge Development

In Section One of this instructor guide, you read about the PADI Learning Pyramid and the basic options for sequencing Knowledge Development and integrating it with the Confined Water Dives and the Open Water Dives. This section provides the background and basis for effective Knowledge Development, including outlines for your elaboration reviews with the Complete System Lesson Guides.

Knowledge Development Principles and Recommendations

Independent Study

Independent study has become popular because it has several major educational and logistical advantages. Here are some of the benefits as they relate to the Open Water Diver course:

1. *Better student preparation.* Research shows repeatedly that many students who study independently generally learn better. Two primary reasons cited for this are that students learn at their own pace, and that they can better accommodate their own learning styles. Both of these contribute to more effective learning and better preparation before elaboration sessions and confined water dives.
2. *More effective use of time.* Independent study shifts time that used to be spent in the classroom learning basic information to the student diver's personal schedule. This makes it more feasible for individuals with busy schedules to participate in scuba diving, and it makes it possible to schedule shorter sessions prior to confined water dives. It also makes it possible for students to do more ahead of time (see Learning Pyramid Option 2) to accommodate schedule restrictions.
3. *More relevant elaborations.* With independent study, your elaborations become much more instructional. Instead of teaching basic dive principles, you *review* and *apply* those principles to student needs and local dive situations. This makes learning more relevant and prescriptive to the student, and it prepares the student better for the confined water and open water dives.
4. *Better business opportunities.* As a by-product of relevant elaboration, you introduce student divers to appropriate

equipment investments, dive travel opportunities, continuing education and other dive-related services. For example, because students arrive at your elaboration session already familiar with basic information about fins, your elaboration should include helping students select the particular fins for the dives they'll make.

5. *Access to more potential students.* As technologies advance, they get better at addressing individual barriers to participation in training and instructor needs in training. You can expect future technological innovations to give PADI Instructors access to individuals who currently don't participate in scuba diving simply because present training methodologies, schedules or access create insurmountable hurdles.
6. *Better use of instructor time.* Independent study makes the instructor's role more important because there is no feasible way for independent study media to address the s*pecific needs, interests and issues of the individual student*. Only an instructor can do that, and *only an instructor can evaluate student diver performance and assess mastery*, particularly with respect to motor skills. Only an instructor can make learning to dive a challenging, fun and exciting dive adventure. Independent study, advances in instructional technology and progress in instructional system design will continue to make learning more effective and efficient, but they won't eliminate the need for a human instructor.

Independent Study Components and Use

There are three main components of PADI's Open Water Diver course instructional system intended for student independent study in the Open Water Diver and Scuba Diver courses. The first two, the PADI Op*en Water Diver Manual* and *Open Water Diver Video,* are used together. Alternatively, the third, the PADI *Open Water Diver Multimedia*, handles the role of both manual and video in a computer-based medium.

The PADI *Open Water Diver Multimedia* offers perhaps the ideal independent study tool because it integrates the video and the manual. *Multimedia* enhances learning by actually "marking" exercise answers because students can't proceed without typing in answers. While the multimedia version may be the "ideal," it's important to consider learning preferences and student comfort; some individuals may be more comfortable with a manual and video tape.

The PADI *Open Water Diver Manual* is a directed study tool that guides learning. It includes several components that are considered basic aspects of valid instructional system design that you won't find in a simple "book about diving." These include the listed Study Objectives, the Exercises and the Knowledge Reviews.

The PADI *Open Water Diver Manual* includes a How to Use This Manual guide, which you may want to emphasize to students. In particular, emphasize *actually marking* (highlighting/underlining) material that relates to Study Objectives and *actually marking* the answers to the Exercises. Many students will perform these steps mentally, but there's much evidence *that actually marking/writing/underlining* — not just thinking about it — bolsters learning by requiring the mind to reprocess studied information during the act of marking/writing/underlining.

The PADI *Open Water Diver Video* covers the same basic information as the manual, but visually so students see and hear what they read about. There's much debate about whether student divers should watch the video before reading the manual or vice-versa. One can argue a case either

way, so it's best for students to accommodate their personal learning styles by watching or reading first as they prefer. Perhaps more significant is the environment in which students watch the video. The ideal is to be in a situation in which they can stop the video to rewind and review, or take a break as necessary. This is typically an independent viewing rather than a classroom viewing.

Accommodating learning styles and people with disabilities.

In the event the student cannot read or has a learning disability, you may make provisions allowing students to take the quizzes or exam orally or with the use of reading aids. As with any quiz or exam, retain the student's answer sheet in your files.

Motivating Independent Study

The biggest challenge with regard to independent study tends to be student divers who don't do it. In a business setting, the desire to accommodate customers sometimes seems to conflict with a need to "make" students study before they show up for your elaboration sessions and the Confined Water Dives. Here are a few tips to minimize this problem.

1. *Be sure student divers know what is expected.* You prevent the overwhelming majority of independent study problems just by being *sure* students know what section(s) of the manual/video/multimedia to read/watch and complete Knowledge Reviews for, and *by when*. Many instructors and dive operations do this by telling students *individually* what's required, *and* by giving them the requirements in writing. Emphasize that the course will be fun and exciting, but it is a course, and that means it involves some reading and learning. Having an orientation session at the before the course starts helps ensure that everyone understands assignments and has the needed materials before meeting for Knowledge Development Section 1 and Confined Water Dive 1.

   Since instructors have a customer/server relationship as well as a student/instructor relationship with divers in the course, many use learning agreements that balance the need to study with customer service. These agreements spell out the responsibilities of the student and the instructor in the course, how you handle circumstances leading to difficulties in learning, etc.

2. *Establish value.* You're less likely to have difficulties when you make it clear that the material they study is important *for their safety*, and that because the instructional sequence builds on prior learning, *they cannot continue in the course* until they complete the required study. It also helps to emphasize that the course is more efficient and more fun, and learning is usually easier, when they complete their independent study on time.

3. *Have a procedure.* Inevitably, someone will show up without having completed the required study. This may happen due to unforeseen circumstances in an individual's life, or due to a failure to understand the need to do so. Be prepared to reschedule/accommodate individuals in as flexible a manner as possible. It often helps to tell student divers how you accommodate this situation in advance, so it's not a surprise.

Review and Elaboration

Thanks to independent study, student divers arrive at your review and elaboration sessions with most, if not all, the foundational information for that section already learned. That's why you administer the quiz (or exam) and go over Knowledge Reviews before your elaboration.

Your goals in the session, then, are to 1) reinforce vital information, 2) apply the principles to specific student needs and to the local environment, and 3) fill in any gaps in student learning and answer questions. Note that "present the information" is *not* on the list — if your presentation simply repeats what the manual/video or multimedia says, you're not making effective use of time. Here's a suggested approach: Begin by collecting and reviewing student Knowledge Reviews, then:

1. *Explain incorrect/incomplete information.* Provide comments and direction so students understand what they didn't get on their Knowledge Reviews.
2. *Issue the appropriate quiz for the section.*
3. *Correct the quiz.* Review incorrect answers, and answer student questions.
4. *Use and apply the Complete System Lesson Guides.* Apply the information to the specific needs of your student divers — the local environment, equipment selection, etc. Keep in mind that they've already mastered the foundational material, so you don't need to repeat this.
5. *Issue the final exam.* After correcting it, review incorrect answers, answer student questions, and review/elaborate to remediate what students missed.

Scuba Diver Requirements

The Knowledge Development requirements for student divers completing the Scuba Diver certification are identical to those completing the Open Water Diver certification, except that Scuba Divers need only demonstrate mastery of Knowledge Development Sections One, Two and Three. The Scuba Diver also signs the *Scuba Diver Statement*.

Scoring the Open Water Diver Course Quizzes and Exam

When using the PADI Open Water Diver Course Quizzes and Exam, students who earn 75 percent or higher on each quiz and the exam do not have to retake that quiz and the exam, though you must review what they miss to achieve mastery. Allow students who earn below 75 percent sufficient time to restudy the material, then administer a retest. In either case, students must demonstrate mastery of *all* items before progressing.

Presentation Outline Complete System Lesson Guides

Preparing Students for the Course

When student divers enroll in the PADI Open Water Diver course, you set them up with the PADI *Open Water Diver Manual* and *Video*, or the *Open Water Diver Multimedia.* Schedule their first confined water dive as soon as possible — the same day, ideally.

Have students fill out the information on the Student Record File, taking note of the PADI Medical Statement to determine if they need to see a physician. (Note: In some areas, physician approval is required by law.) This provides time for students who need to see a physician to do so, avoiding delays.

Registration and Orientation Session

Training Aid Recommendations

1. Motivational videos and slide programs.
2. Dive equipment - masks, fins, snorkels, scuba unit, weight systems, exposure suits, knives.
3. Materials to conduct Discover Scuba experience - Discover Scuba video or Discover Scuba Diving flip chart, and Discover Scuba student statements.

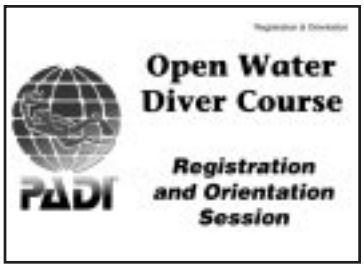
Notes:

1. Beginning the PADI Open Water Diver course with an orientation session reduces the time of your first knowledge development review and elaboration. The idea is to get student divers excited about diving, and to get them into the water as soon as possible. Keep this session brief so you can do this, but use it also to handle administrative requirements and loose ends that may create delays later in the course.

2. When possible, conduct this session at a PADI Dive Center or Resort and use equipment on the sales floor as training aids. This familiarizes the students with equipment, and with the dive center/resort.

3. When youngsters take this course, encourage parents/guardians to come to this session. Parents/guardians must sign administrative paperwork prior to in-water activities.

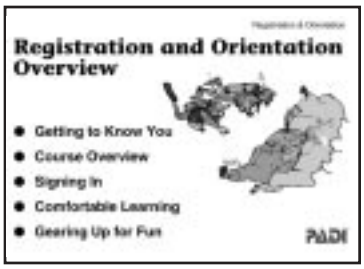
Presentation



Contact Suggestions

1. Welcome the students and thank them for enrolling. Explain that the course will be adventurous and fun, with an emphasis on diving in confined water and then in open water. Explain that you and your staff are there to help them realize their desire to become divers, and to have fun in the process.
2. Show the *This Is Diving* video, plus some videos showing trips/classes/fun with your dive operation.

Overview, Learning Objectives and Example Value Statement



I. Introductions
   - *We'll have more fun diving together if we know a bit about each other, so we'll spend some time getting to know each other.*

II. Course Overview
   - Why do you need to have a certification to dive? *By understanding what certification means, you'll understand what you'll be qualified to do after you finish the course.*
   - What are the course requirements, structure and schedule? *Knowing these eliminates misunderstandings regarding what we're going to do, when, and the requirements for success in this course.*

III. Signing In, Gearing Up for Fun
   - *We'll handle any outstanding paperwork and look at some of the dive equipment you'll be using during this course.*

IV. Experiencing Scuba [Optional activities]
   - *After we finish, which won't take long, we'll go diving in the pool (or confined water). You'll hear a short briefing, and then we'll go get wet.* [Note: Assuming all medical requirements are met.]

Outline

I. Introductions

Introduce yourself and assistants.

[Optional — have students introduce themselves. They can explain who they are, what they do, why they're interested in diving, etc.]

II. Course Overview

A. Certification

1. Upon successful completion of the course, you'll receive the PADI Open Water Diver or PADI Scuba Diver (minimum age 15 years), or PADI Junior Open Water Diver or Junior Scuba Diver (minimum age 10 years).
2. A certification card shows that you completed the course according to PADI Standards.
3. Dive professionals (boat operators, dive store employees, resort owners, etc.) will ask to see your card.
4. A certification card allows you to:
   a. Rent or buy scuba equipment.
   b. Have your tank filled.
   c. Participate in dive activities.
   d. Take continuing education courses.
   e. Dive in areas and under conditions similar to those in which you having training or experience.

B. Course Structure

1. The PADI Open Water Diver course is:
   a. Performance-based. This means that you can progress by meeting learning requirements.
   b. Divided into three segments: Confined Water Dives, Knowledge Development and Open Water Dives.
2. The course is taught in five confined water dives and five knowledge development sections (three each for Scuba Diver). You meet the requirements for each before moving on to the next. We'll begin with your first confined water dive tonight [or state when scheduled].
3. You'll complete most of your knowledge development at your own convenience by reading the manual and watching the video (multimedia). When we meet, a short quiz tells me how well you understand the material; then we'll review any areas where you have difficulty and I'll fill in information specific to diving around here. After the last

section, you'll take a final exam that makes sure you remember everything you've learned throughout the course.

4. We'll make four scuba open water dives together (two for Scuba Diver), during which you'll apply what you've learned, plus develop some new skills. But we'll spend a good bit of time exploring and looking around, too.

   [Mention skin dive if included. Discuss the option of referrals and what it means.]

C. Course Requirements

1. Attendance requirements [Emphasize performance based requirements and need to complete each section and session in order. Discuss how you'll handle make-ups. Discuss what can be done if the course cannot be completed.]
2. Independent study
   a. Prior to each class, watch the Open W*ater Diver Video* and complete the reading, exercises and Knowledge Review questions in your *Open Water Diver Manual*. (Or use the multimedia version) I'll look over your Knowledge Review when we meet for the review.
   b. As you read, underline or highlight important information - particularly the information related to objectives.

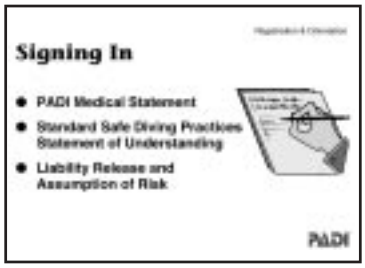
      [*Introduce your Learning Agreement if you're using one.*]
3. Equipment requirements

   [Outline what equipment student divers need for the confined water dives and the open water dives. Merely review the list here. Later, you'll give a complete overview of dive equipment.]
4. Log books

   [Asks students to bring their log books to all sessions for your signature.]
5. Other:

D. Course Schedule

[*Review the course schedule — times, locations, what everyone will be doing — in detail.*]



III. Signing In

[*Be sure you have the following for each student: PADI Medical Statement, Standard Safe Diving Practices Statement of Understanding (or Scuba Statement of Understanding and Liability Release and Assumption of Risk form. Complete store required or local administrative paperwork.]*

IV. Gearing Up for Fun

[*Show the Lesson Guide, quickly reviewing the major pieces of dive equipment and discussing the equipment needed for the first confined water dive. Show, and as appropriate, have student divers try on actual masks, snorkels, fins, BCD, tanks and regulators. Emphasize various styles, different features and materials.*]

Summary

Preview key points of the registration and orientation session.

Reminders for Next Class Meeting

Prior to the next meeting, complete Knowledge Development Sections One and Two in the *Open Water Diver Manual* and *Video (or Multimedia)*.

V. Dive Today

[Provide the Discover Scuba or Discover Scuba Diving Water Skills Introduction and Orientation briefing; you may do this at the confined water dive site using the Discover Scuba Diving flip chart. Then conduct Confined Water Dive One.].

VI. Water Skills Assessment

[*Students must demonstrate, in confined water, they possess reasonable aquatic ability without using equipment before they participate in open water dives. At some point prior to certification, they must also complete a 200 metres/yard continuous surface swim or a 300 metre/yard mask, snorkel and fin swim, plus a swim/float without using a mask, fins, snorkel or any other swim aid. Following the confined water dive, or within it, you may get some of this out of the way. It's* ***not*** *recommended that you perform water skills assessment without a confined water dive.*]

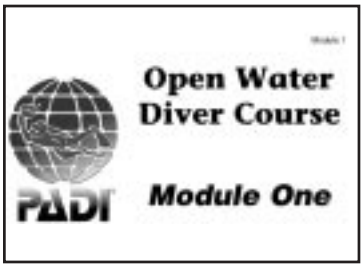
Knowledge Development One

Training Aid Recommendations

1. Complete System Lesson Guides.
2. Dive equipment as discussed.
3. PADI *Open Water Diver Video*.

Presentation

[*Reminder: This is a review and elaboration. Move quickly over areas students know well based on their Knowledge Reviews and quiz scores. Spend more time where they had problems, where you need to add detail specific to your students and the local dive environment and where student divers express interest.*]



Contact Suggestions

1. Ask students to imagine what it's like to be a fish and how it may be the same, and how it may differ from, being a diver.

2. Compare ear "popping" when flying with pressure changes in water.

3. Tell students a story about an unusual experience underwater that highlights the experience of neutral buoyancy, such as trying to turn a handle in a pool, only to find yourself turning the other way.

Overview, Learning Objectives and Example Value Statements

I. Buoyancy
- Why control your buoyancy?
- How do you control your buoyancy? *Buoyancy control lets you control the dive — you can feel weightless, or float effortlessly on the surface. By learning buoyancy control, you'll be able to relax and avoid accidentally harming the underwater world.*

II. Comfortable Descents
- How do you equalize your ears and other air spaces as you descend?
- What should you do if you feel discomfort in your air spaces when you descend?
- What can make equalization difficult or impossible?

At one time or another' you've probably dived to a pool bottom and felt discomfort in your ears. You'll learn how to avoid discomfort, what to do if you feel discomfort, and some of the things that can make equalizing difficult.

III. Comfortable Ascents

- What is the most important rule in scuba diving? *In scuba diving, what you don't know* ***can*** *hurt you. By knowing and following this rule, you can avoid one of the most serious injuries that can happen to a diver.*
- What should you do if you feel discomfort in your ears and sinuses during ascent? *Although it's rare, if you have ear or sinus equalization problems when you ascend, you'll want to know what to do about it.*

IV. Breathing Underwater

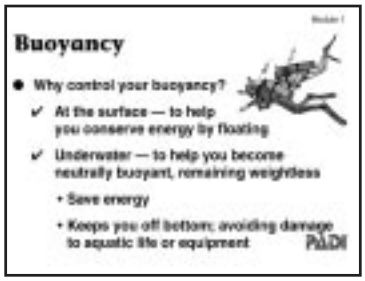
- What's the relationship between depth and air supply?
- What is the most efficient way to breathe underwater?

  Breathing underwater differs in a couple respects from breathing at the surface. We'll look at how you breathe as a diver so that you don't waste air, and so you stay relaxed.

Conduct

[*Ask divers to listen, to ask questions as necessary and to snore loudly if you're boring them etc., – whatever works to keep things light and fun for you and them.*]

Outline



I. Buoyancy - Positive, Neutral and Negative

A. Why control your buoyancy?

1. At the surface - to help you conserve energy by floating.
2. Underwater - to help you become neutrally buoyant, remaining "weightless." This saves energy and keeps you off the bottom, which in some areas can damage sensitive aquatic life. Staying off the bottom also keeps your equipment from being abused.

   [*Apply to specifics of student/environment needs, such as buoyancy control for underwater photography, etc.*]

B. How do you control your buoyancy?

1. BCD (buoyancy control device) — lets you vary buoyancy by adding and releasing air.
2. Weight system offsets positive buoyancy of exposure suit and your body.

   [*Apply to specifics of suits students will use.*]
3. Lung volume - you gain buoyancy when you inhale and lose buoyancy when you exhale.

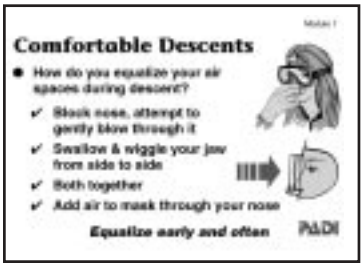
   [*Explain that they'll practice buoyancy control during the confined water dives, using breath control to fine-tune how buoyant they are.*]

II. Comfortable Descents

A. How do you equalize your air spaces during descent?

1. Block your nose and attempt to gently blow through it.
2. Swallow and wiggle your jaw from side to side.
3. Both together- swallow and wiggle your- jaw from side to side while attempting to blow through your blocked nose.

   [Have students try these techniques gently.]
4. Add air to your mask through your nose. This prevents an uncomfortable mask squeeze.
5. Equalize early and often - every metre/few feet while descending. Don't wait for discomfort — by equalizing often, you shouldn't feel discomfort.

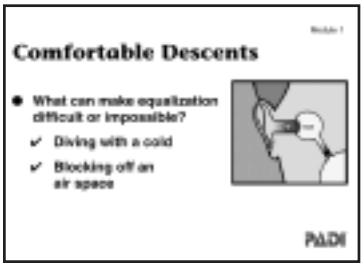


B. What should you do if you feel discomfort in your air spaces when you descend? [Squeezes]

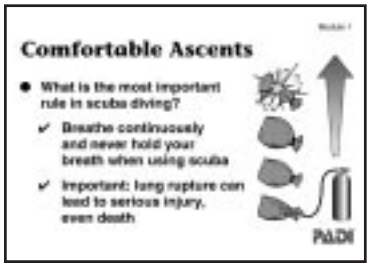
1. Ascend until the discomfort goes away.
2. Gently attempt to equalize again.
3. If air space equalizes, continue down slowly if no discomfort.
4. If you can't equalize, discontinue the dive. [Explain how students should signal you that they can't equalize during confined and open water dives.]

C. What can make equalization difficult or impossible?

1. Diving with a cold, allergy or other congestion.



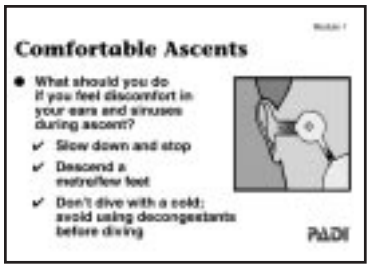
2. Blocking off an air space - such as with ear plugs or a tight fitting exposure suit hood.
[*If using hoods during the course, discuss types in regards to squeeze prevention.*]



III. Comfortable Ascents

A. What is the most important rule in scuba diving?

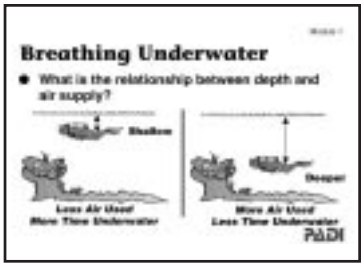
1. The most important rule in scuba diving is: Breathe continuously and never hold your breath when using scuba.
[*To apply this rule, inform students that you'll help them overcome their instinct to hold their breaths underwater. For example, when the regulator is out of their mouth, they'll exhale small bubbles.*]
2. Important: Lung rupture can lead to serious injury, even death. A rupture can force bubbles into the bloodstream, blocking blood flow to the brain and other parts of the body, leading to paralysis, serious injury or death. It is difficult to treat, but easy to avoid – never hold your breath underwater. Remember the flexible bag filled with air at depth, sealed, and then brought to the surface? If you were to hold your breath while ascending (for even one metre/ a few feet), your lungs could over expand similarly, causing lung rupture.



B. What should you do if you feel discomfort in your ears and sinuses during ascent? [Reverse Blocks]

1. If you feel discomfort in your ears or sinuses during ascent—stop.
2. Descend a metre/a few feet and allow the trapped air to work its way out.
3. To avoid ear and sinus reverse blocks, don't dive with a cold; don't use decongestants or medication before diving because it may allow you to equalize while descending, but then wear off, trapping air in the ears/sinuses. [Explain *how you want students to communicate reverse block. Also, outline what you want other student divers to do if someone gets a reverse block. Explain that they may not participate in confined or open water dives with a cold.*]

IV. Breathing Underwater



A. What is the relationship between depth and air supply?

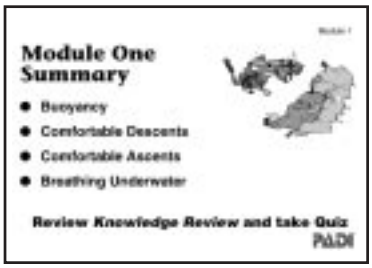
1. Shallow diving uses less air, giving you more time underwater.
2. Deeper diving uses more air, giving you less time underwater.

   [*Compare the depths and approximate dive times using the same tank for local dives at various depths.*]

B. What is the most efficient method of breathing underwater?

1. Deep, slow breathing is the most efficient method of breathing dense air while diving.

   [*Explain to students that they want to breathe this way during their confined and open water dives.*]
2. For maximum air conservation and comfort, relax and don't overexert yourself underwater.
3. Pace yourself - breathe normally and never get out of breath. The more you work, the more air you use.



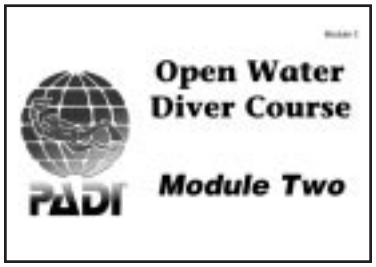
Summary

[Review key points. Also, restate objectives as answers to questions and restate values.]

Knowledge Development Two

Training Aid Recommendations

1. Complete System Lesson Guides.
2. Dive equipment as discussed.
3. PADI *Open Water Diver Video*.

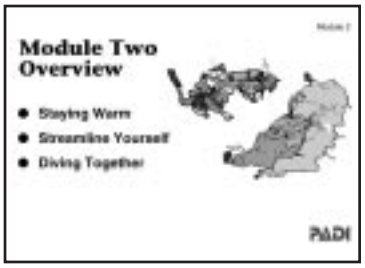


Presentation

[*Reminder: This is a review and elaboration. Move quickly over areas students know well based on their Knowledge Reviews and quiz scores. Spend more time where they had problems, where you need to add detail specific to your students and the local dive environment and where student divers express interest.*]

Contact Suggestions

1. Specific to heat loss and movement, have students compare the differences between being on land and underwater.
2. Explain how you stayed warm on a recent dive—what suit and accessories you used and why.
3. Tell students a story highlighting the benefits of the buddy system, perhaps how having a buddy at hand made what might have been a major problem an easily handled minor problem.



Overview, Learning Objectives and Example Value Statement

I. Staying Warm
- How can you stay warm underwater?
- What should you do if you begin shivering continuously?

Getting cold takes the fun out of diving, and even a small loss of body heat has the potential to be a serious health threat. For these reasons, it's important to know how to stay warm, and what to do if you don't.

II. Streamline Yourself
- How should you move underwater?
- What should you do if you get tired on the surface or underwater?

Diving is exciting, but you shouldn't get winded. Keeping a few points in mind allows you to avoid getting out of breath, and helps you prevent cramping or fatigue. You also need to know how to respond if you do get tired.

III. Diving Together

- What nine considerations should you discuss with your buddy when planning a dive?
- What should you do if you lose contact with your buddy or the class underwater?

You've learned that you always dive with a buddy. Now we'll look at steps you want to take to make the buddy system effective.

Conduct

[*Ask divers to listen, to ask questions as necessary. Keep it light and fun.*]

Outline

I. Staying Warm

A. How can you stay warm underwater?

1. Exposure suit options.

   [*Highlight exposure suits students will use for the confined and open water dives, those used locally, and those used when traveling to specific dive destinations.*]

2. Exposure suit accessories needed for our confined and open water dives.

   [*Show and explain exposure suit accessories needed for upcoming confined and open water dives, and those used locally, and those used when traveling to specific dive destinations.*]

B. What should you do if you begin shivering continuously?

1. Continuous shivering is a warning signal that means you've lost so much body heat that if you lose much more, your body will begin having trouble functioning (hypothermia). If you begin to shiver continuously during our open water dives, inform me or our assistant immediately.

2. If you begin to shiver continuously, *immediately* get out of the water, dry off and seek warmth.

[*Outline a few methods local divers use to get warm after a dive: Showers on boats, hot drinks, warm clothing types, etc.*]

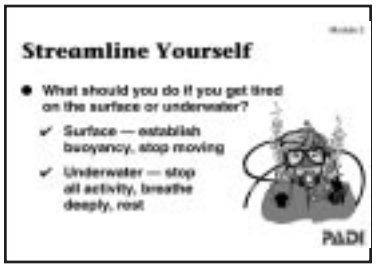
II. Streamline Yourself

A. How should you move underwater?

1. Move slowly and steadily to avoid overexertion and getting out of breath. Watch how the staff and I move during our dives.
2. Avoid rapid and jerky movements — they waste energy.
3. Take your time underwater, avoid overexertion — doubling your speed takes four times the effort.
4. Streamline yourself to reduce drag. Don't let equipment dangle; it slows you down, wastes energy and can damage the environment. Keep your arms at your side. You'll use properly streamlined equipment in your confined and open water dives.

   [*Encourage students to check for unsecured hoses and other dangling equipment during the predive safety check.*]
5. As much as possible, move horizontally through the water.

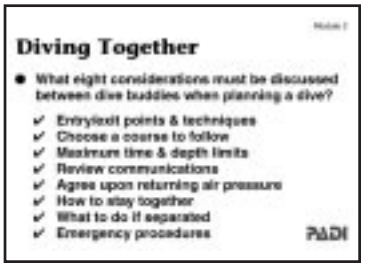
   [*Discuss the trim—avoiding overweighting, and adjusting weight for a comfortable, balanced horizontal swimming position.*]



B. What should you do if you get tired on the surface or underwater?

1. If you experience overexertion on the surface, establish buoyancy and stop moving. Rest, catch your breath and then continue at a slower pace.
2. If you experience overexertion underwater, stop all activity, breathe deeply and rest. Hold on to something for support if needed. If you become overexerted during our open water dives, inform me or our assistant immediately.

   [*Show students the signal to use.*]



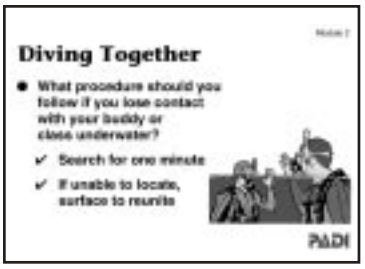
III. Diving Together

A. What nine considerations should you discuss with your buddy when planning a dive?

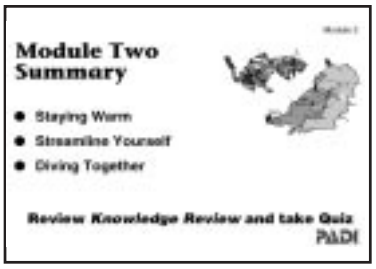
[*Explain that during their open water dives, they'll cover these points during predive briefings, just as they will with their buddies after certification.*]

1. Establish entry/exit points and techniques.
   [*Briefly discuss common local entries.*]
2. Choose a course to follow.
   [*Explain that later they'll learn to use a compass to follow a course underwater.*]
3. Agree on maximum time and depth limits.
   [*Describe various ways you can determine depth before a dive—charts, local divers, local dive centers and resorts, etc.*]
4. Review communications.
5. Agree upon returning air pressure.
6. Discuss how to stay together.
7. Discuss what to do if separated.
8. Discuss emergency procedures, including air sharing procedures.
9. Agree on an objective — it may be simple, such as "sightsee the reef," but you need to agree on what you're doing together.

B. What should you do if you lose contact with your buddy or the class underwater?
   1. Search for each other or the class for not more than one minute.
   2. If unable to locate, surface to reunite.
   3. In some situations after you're certified, you may want to avoid surfacing — in that case, discuss with your buddy and agree on how to reunite if separated.



[**Emphasis point:** It is your responsibility to stay with your buddy, to plan your dive with your buddy, to follow that plan with your buddy and to be ready to assist each other. No one can do this for you—*you* have to do it.]



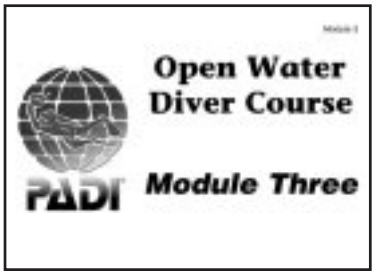
Summary

[*Review key points. Also, restate objectives as answers to questions and restate values.*]

Knowledge Development Three

Training Aid Recommendations

1. Complete System Lesson Guides.
2. Slides/video of local dive environment.
3. PADI *Open Water Diver Video*.
4. Local environmental information (tide tables, fish and game laws, charts and maps, etc.)
5. PADI Rescue Diver course materials and promotional brochure.

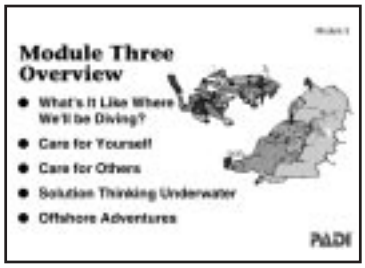


Presentation

[*Reminder: This is a review and elaboration. Move quickly over areas students know well based on their Knowledge Reviews and quiz scores. Spend more time where they had problems, where you need to add detail specific to your students and the local dive environment and where student divers express interest.*]

Contact Suggestions

1. Compare the planning of a long hike over unfamiliar territory with that of planning a dive at a new site. Relate hiking to diving by discussing knowledge of the environment, planning and problem management.
2. Tell students about your most memorable dive at the dive site they'll go for open water dives. Work in descriptions of local aquatic inhabitants and the site itself.



Overview, Learning Objectives and Example Value Statements

I. What's It Like Where We'll be Diving?

- Relative to temperature, visibility, currents, and bottom composition, what is the dive environment like where we will make our open water dives?
- What aquatic animals and plants will we see during our open water dives?

  Soon you'll be making open water dives, so you'll probably like an idea of what you can expect during the dives.

II. Care for Yourself

- Until you complete further training or gain more experience, where should you dive after this course?
- What are three ways to prevent or control most diving problems that occur at the surface?
- How can you help yourself in the unlikely event a problem does occur at the surface?

You'll find that if you and your buddy dive within your limits, plan your dives and follow safe diving guidelines, you'll usually avoid problems. However, problems can occur, so you need to know the basics for handling them.

III. Care for Others

- What are the four basic steps to assisting another diver?

Since you care about your diving buddy, you also need to know how to assist your buddy if necessary.

IV. Solution Thinking Underwater

- How can you prevent or control most problems that may occur underwater?
- Given a certain out of air situation, what emergency procedure would you use to get to the surface? [*Explain that you'll look at several situations.*]

Knowing the basics for solving underwater problems prepares you to handle problems if they occur.

V. Offshore Adventures [Use this topic if open water dives during the course will be conducted from a boat and/or if local diving typically involves boats.]

- What are some specifics about the dive boat(s) you'll ride aboard during this course or on dive vacations?

When you dive from a boat, there are a few procedures to follow so you stay organized, know what to do and have fun.

Conduct

[*Ask divers to listen, to ask questions as necessary. Keep it light and fun.*]

Outline

I. What's It Like Where We'll be Diving?

A. Relative to temperature, visibility, currents, and bottom composition, what is the dive environment like where we'll make our open water dives?

1. Water temperature.

[*Elaborate on the water temperature at local dive sites or wherever divers will be making their open water dives. Highlight the differences, if any, between surface temperatures and temperatures at depth. Give examples of varied conditions at popular dive destinations worldwide.*]

2. Visibility.

[*Elaborate on the visibility at local dive sites or wherever student divers will be making their open water dives. Give other examples. Highlight local factors affecting visibility: a) water movement, b) weather, c) suspended particles and d) bottom composition. Discuss ways to keep visibility at its maximum during dives.]*

3. Currents.

[*Elaborate on currents (if any) at local dive sites or wherever students will be making their open water training dives. If they'll dive where currents are common, discuss current diving techniques. Give examples of varied conditions at popular dive destinations.*]

4. Bottom compositions.

[*Elaborate on the bottom compositions at local dive sites or wherever students will be makings their open water dives. Emphasize the need for each student to be especially cautious when diving over bottoms inhabited by organisms, for personal safely and to protect the aquatic organisms.*]

B. What aquatic animals and plants will we see on our open water dives?

[*Elaborate on the aquatic animal and plant life at local dive sites or wherever students will make their open water dives. Emphasize that nearly all aquatic animals are nonaggressive and harmless, and to not chase, tease or threaten underwater creatures. If possible, show slides or videos of local, common aquatic creatures and plants.*]

II. Care for Yourself

A. Until you complete further training or gain more experience, where should you dive after this course?

1. Once you finish this course, dive in an environment and in conditions as good as or better than those with which you have training and/or experience, or with a professional level diver. [*Remind Scuba Divers that they will always dive with a professional. Discuss specific areas locally that are well suited for new divers — conditions, site, emergency assistance close by, etc.]*

2. The following courses expand your skills and broaden your experience with supervision there to guide you:

   a. Adventures in Diving program—advances your dive skills in different activities.

   b. Emergency First Response —training that teaches CPR and first aid emergency care.

   [*Tell students when the next course will be and that nondiving friends and family may join.*]

   c. PADI Rescue Diver course—fine-tunes your ability to prevent problems, and teaches you how to handle specific and potentially complex diving problems.

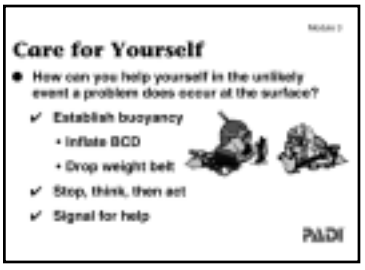
   [*Tell students that the PADI Advanced Open Water Diver certification is a prerequisite to this course. Give them the dates of your next Advanced Open Water program, or Adventure Dives for those who just want to "try" one dive in an activity that interests them.*]

B. What are three ways to prevent or control most diving problems that occur at the surface?

1. Dive within your limits.
2. Relax while you dive.
3. Establish and maintain positive buoyancy when at the surface.

C. How can you help yourself in the unlikely event a problem does occur at the surface?

1. Immediately establish buoyancy by either



inflating your BCD or dropping your weights (weight system).

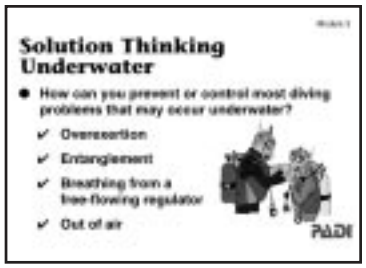
2. Stop, think and then act.
3. Don't hesitate to signal for help - use a whistle, signal tube or wave. [*Outline specific common problems - leg cramps, overexertion, being out of breath, etc. Explain that they'll learn how to handle these basic problems during confined and open water dives, but encourage them to continue their training.*]

III. Care for Others

A. What are the four basic steps to assisting another diver?

1. Provide ample positive buoyancy — throw/extend flotation and/or inflate the BCD; drop weights.
2. Calm the diver.
3. Help the diver reestablish breathing control.
4. Assist diver back to shore/boat if necessary.

[*Explain that they'll practice tired diver tows during Confined Water Dive Three.*]



IV. Solution Thinking Underwater

A. How can you prevent or control most problems that may occur underwater?

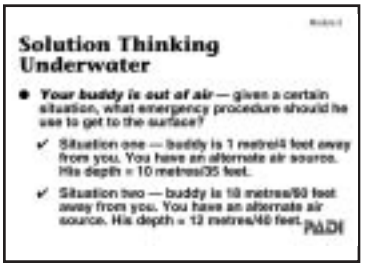
1. Overexertion.
   a. Move and breathe slowly.
   b. Pace yourself.
   c. If overexerted, stop, rest, relax and breathe slowly.

   [*Discuss environmental conditions that may cause overexertion - surf, currents, surge, etc.*]
2. Entanglement.
   a. Stop, think and then act. Act based on a plan; don't react based on instinct.
   b. Work slowly and calmly to free yourself. Don't try to turn, because this tends to tangle you more.
   c. Get your buddy to help.

   [*List the most common entanglement sources in the local aquatic environment.*]

3. Breathing from a free flowing regulator.
   [Describe how it happens (sand, freezing, poor maintenance, etc.) and briefly describe the technique they'll use in Confined Water Dive Three.]
4. Out of air.
   a. Monitor your air supply by looking at your pressure gauge/computer every few minutes.
   b. Being out of air is a big culprit in causing diver injury, yet it's a problem you have complete control over.
      [*Relate this to the air depletion exercise from Confined Water Dive Two. Emphasize that you would like to see them monitor their pressure gauge/computer often during the course.*]

B. Your buddy is out of air—given a certain situation, what emergency procedure should your buddy use to get to the surface?
   [*Remind divers of the options they've studied. Also, remind them that discussing emergency procedures is part of dive planning: alternate air source location, air reserves for the return leg and ascending, whether buddy breathing is an option, etc.*]



   1. Situation One—Your buddy is suddenly out of air about a metre/three feet away. It is 10 metres/33 feet to the surface. Your buddy's best option is:
      [*Allow students to discuss their answer. The generally preferred answer is to signal "out-of-air,." secure your alternate air source, begin breathing and when comfortable, ascend with you.*]
   2. Situation Two—Your buddy takes a breath from his regulator, it suddenly becomes difficult to inhale. The SPG shows zero, and you're about 18 metres/60 feet away. It is 12 metres/40 feet to the surface. Your buddy's best option is:
      [*Allow students to discuss their answer. The generally preferred answer is: Your buddy should make a controlled emergency swimming ascent by swimming to the surface, exhaling continu-*

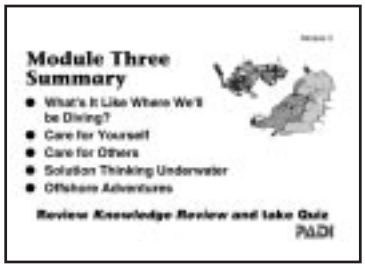
ously, making an aaahhhh sound. Point out that for this situation to occur, you and your buddy would have been farther apart than you should be; an effective buddy system calls for staying close enough to assist each other.]

V. Offshore Adventures

[*Use this topic if you will conduct open water dives from a boat. Suggested: Show slides or a video of boats used in the course or on sponsored dive trips.*]

A. What are some specifics about the dive boats we'll use during this course or on your dive vacations?

1. Basic layout
2. General rules
3. Where to stow dive equipment and personal belongings
4. Entry and exit guidelines/suggestions
5. Emergency procedures



Summary

[*Review key points. Also, restate objectives as answers to questions and restate values.*]

Reminder for Knowledge Development Section Four

Read the *Instructions for Use* that comes with the RDP Table or Wheel. If learning to use The Wheel, read the first five sections and work the sample problems. If learning to use the Table, read and complete the sample problems and exercises up to "Finding a Minimum Surface Interval." These are also in the *Open Water Diver Multimedia*.

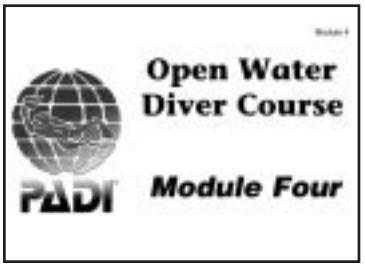
Knowledge Development Four

Training Aid Recommendations

1. Complete System Lesson Guides.
2. PADI *Open Water Diver Video*.
3. Giant RDPs.

Presentation

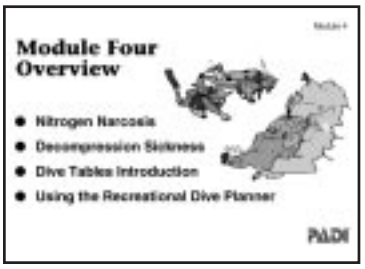
[*Reminder: This is a review and elaboration. Move quickly over areas students know well based on their Knowledge Reviews and quiz scores. Spend more time where they had problems, where you need to add detail specific to your students and the local dive environment, and where student divers express interest.*]



Contact Suggestions

1. Compare using a road map to plan a journey with using the Recreational Dive Planner to plan a dive.
2. Tell students about the first time you ever experienced nitrogen narcosis. Explain how you handled it safely.
3. Ask students why they believe there are rules for driving a car—speed limits, rules of the road, etc. Most will answer "for safety." Segue to the fact that safe diving has similar limits and rules, many of which they've already learned.

Overview, Learning Objectives and Example Value Statements



I. Nitrogen Narcosis
   - How should you react if nitrogen narcosis becomes a problem?

     Nitrogen narcosis can create a hazard, so you'll want to know how to deal with it.

II. Decompression Sickness
   - How do you avoid decompression sickness?
   - What should you do if you suspect you might have decompression sickness symptoms?

     It's easy to minimize the risk of decompression sickness by staying within established limits and following guidelines. If you fail to do this, decompression sickness is potentially life threatening.

III. Dive Tables and Dive Computers Introduction

- What do these terms mean: dive profile, no decompression limit, bottom time, repetitive dive, surface interval, and pressure group?
- What are the general rules for the Recreational Dive Planner?
- How does a dive computer compare to a dive table, and what rules and recommendations apply?

As you know, dive tables and computers help you determine the maximum time and depth limits for avoiding decompression sickness. To use tables and computers, you have to understand the terminology, recommendations and guidelines that apply to them.

IV-A. Using The Wheel

[*Use this portion of the presentation when teaching The Wheel . Use IV-B when teaching the Table RDP. When working sample problems, draw dive profiles to help students follow.*]

- How do you check The Wheel for accuracy?
- How do you find the NDL for any depth between 0 metres/0 feet and 40 metres/130 feet?
- How do you find the pressure group for a certain dive depth and time?
- How do you find the pressure group after a surface interval?
- How do you plan repetitive dives?
- What are the special rules for three or more repetitive dives in one day?

Knowing how to use the Recreational Dive Planner allows you to plan dives within appropriate limits.

IV-B. Using the Recreational Dive Planner Table Version

[Use this portion of the presentation, IV-B, when teaching the Table RDP. When working sample problems, draw out dive profiles to help students follow along.]

- How do you find the NDL for any depth between 0 metres/0 feet and 40 metres/130 feet?
- How do you find the pressure group for a certain dive depth and time?
- From Table 2, how do you find the pressure group after a surface interval?
- How do you find residual nitrogen times on Table 3?

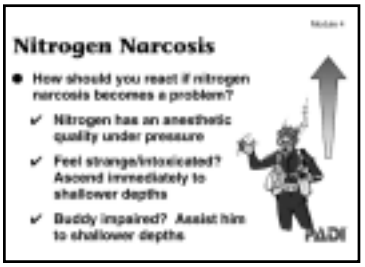
- How do you find adjusted no decompression limits on Table 3?
- How do you plan repetitive dives?
- What are the special rules for three or more repetitive dives in one day?

Knowing how to use the Recreational Dive Planner allows you to plan dives within appropriate limits.

Conduct

[*Ask divers to listen, to ask questions as necessary. Keep it light and fun. For the RDP portions, students will need their RDPs, paper and pen.*]

Outline



I. Nitrogen Narcosis

A. How should you react if nitrogen narcosis becomes a problem?

1. Nitrogen has an anesthetic quality under pressure.
2. If you begin to feel strange or intoxicated, ascend immediately until you reach a depth at which the feelings diminish.

   [*Emphasize that it's best to experience nitrogen narcosis for the first time under supervision, such as during the deep dive in the Adventures in Diving program*.]
3. If acting impaired, assist your buddy to shallower depths.

   [*Remind divers that nitrogen narcosis is not dangerous or harmful by itself, but creates a hazard by impairing judgment, reactions and problem solving ability*.]

II. Decompression Sickness

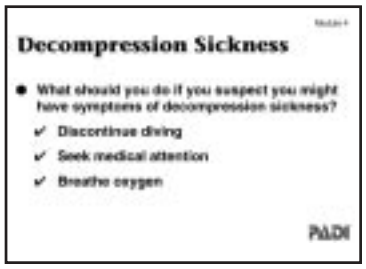
A. How do you avoid decompression sickness?

1. Decompression sickness is a medical condition caused by excess nitrogen forming bubbles in the blood vessels and body tissues following a dive. Bubbles block blood flow and nerve signals.
2. Follow established safe time and depth limits from validated dive tables/computers.

   [*Provide examples of how you follow tables/computers on every dive*.]

3. Ascend slowly — maximum 18 metres/60 feet per minute (slower if stipulated by your computer).
   [*Explain how they gauge their ascent rate in confined and open water dives.*]
4. Make a safety stop at 5 metres/15 feet for three minutes or longer after every dive.
   [*Review the specifics of how you'll make safety stops during the open water dives.*]

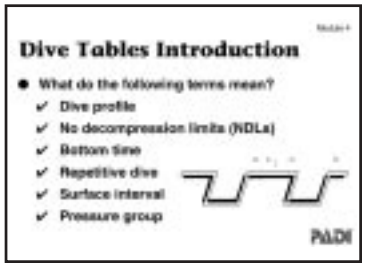
Emphasis Note: Dive tables are based on mathematical models. Because people differ in their susceptibility to decompression sickness, no dive table or computer can guarantee that decompression sickness will never occur, even though you dive within table/computer limits. Always dive *well within* the limits your computer or table provides.



B. What should you do if you suspect you might have symptoms of decompression sickness?
   1. Discontinue diving.
   2. Seek medical attention. When possible, consult a physician trained in dive related problems, but any physician will do.
      [*Provide students with local diving emergency phone numbers (DAN, DES, etc.)*]
   3. Breath oxygen at the highest concentration possible. Breathing oxygen helps eliminate nitrogen from the body.

Emphasis Note: Even if you vaguely suspect you might have decompression sickness, seek treatment immediately; do not delay. Delays can result in permanent residual symptoms.

III. Avoiding Decompression Sickness - Dive Tables Introduction

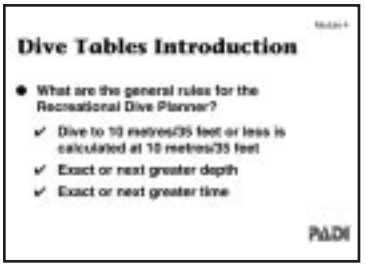


A. What do the terms no decompression limit, bottom time, repetitive dive, surface interval, pressure group and dive profile mean?
   1. Dive profile: a graphic representation of a dive.

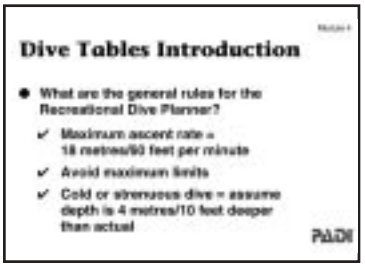
[Use the dive profile on the lesson guide to review the following information. Explain how to use profiles to plan dives. Use examples of actual dives to show application and increase student interest when reviewing terms and rules.]

2. No decompression limits (NDLs) — a.k.a. no stop limits: found on dive tables — the maximum allowable bottom time for a given depth.
3. Bottom time: Using the RDP, the time in minutes from the beginning of descent until the beginning of final direct ascent to the surface or safety stop.
4. Repetitive dive: using the RDP, a dive made within six hours of another dive.
5. Surface interval: the time spent on the surface between repetitive dives.
6. Pressure groups: Letters that represent the amount of *residual nitrogen*—excess nitrogen left in your body after a dive. Pressure group A indicates the least amount of residual nitrogen. Pressure group Z indicates the greatest allowable amount. Using the RDP, after a six hour surface interval, there is no need for a pressure group since for practical purposes there is no remaining residual nitrogen.

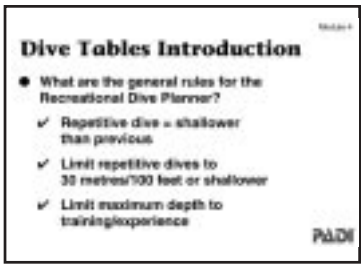
B. What are the general rules for the Recreational Dive Planner?



1. Plan any dive planned to 10 metres/35 feet or less as a dive to 10 metres/35` feet.
2. Use the exact or next greater depth shown for the depths of all dives.
3. Use the exact or next greater time shown for the times of all dives.
4. Slowly ascend from all dives at a rate that does not exceed 18 metres/60 feet per minute. This is a speed limit; it's fine to go slower. The RDP was designed and tested using this ascent rate. A faster ascent rate increases the risk of decompression sickness.



5. Never exceed RDP limits and whenever possible, avoid diving to the limits of the planner. 42 metres/140 feet is for emergency



purposes only, do not dive to this depth.

6. When planning a dive in cold water, or under conditions that may be strenuous, plan the dive assuming the depth is 4 metres/10 feet deeper than actual.
7. Plan repetitive dives so each successive dive is to a shallower depth. The dive medical community recommends avoiding following a dive with a deeper dive — you can calculate such a dive with a table or computer, but this practice has a disproportionately high rate of decompression sickness. Always plan your deepest dive first. The RDP was designed and tested using this accepted practice. To dive otherwise increases the risk of decompression sickness.
8. Limit all repetitive dives to 30 metres/100 feet or shallower.
9. Limit your maximum depth to your training and experience level. Novice = 18 metres/60 feet. Recommended depth limit for Advanced Open Water Divers = 30 metres/ 100 feet. Diver with Deep Diver training and a reasonable objective = 40 metres/ 130 feet absolute maximum.

C. How does a dive computer compare to a dive table, and what rules and recommendations apply?

1. A dive computer simply writes a custom dive table for your exact dive using the same theories and models used by tables.
2. Dive computers are no more or less valid than dive tables.
3. The guidelines for diving with tables apply to computers (make dives successively shallower, deepest dive first, etc.).
4. Always dive well within computer limits. You should always have ample no decompression time showing on your computer display.

   [*If teaching students Table RDP, skip the next segment and go to IV-B.*]

IV-A. Using The Wheel

[During this presentation demonstrate using the giant Wheel.]

A. How do you check your Wheel for accuracy?

1. Before you use The Wheel, always check the alignment.

   [*Have students check the alignment*.]

2. Proper care and cleaning after use and proper storage.

B. How do you find the NDL for depths between 0 metres/0 feet and 40 metres/130 feet?

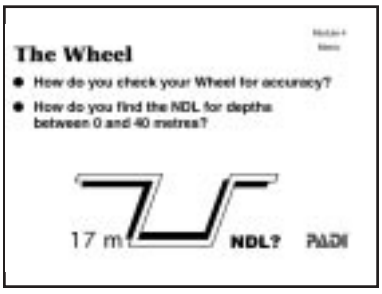
l. Side One features.

   a. Depth curves
   b. NDL and ML marks
   c. Yellow bottom-time ring
   d. White triangle, yellow triangle
   e. Pointer—the entire movable indicator with the yellow triangle

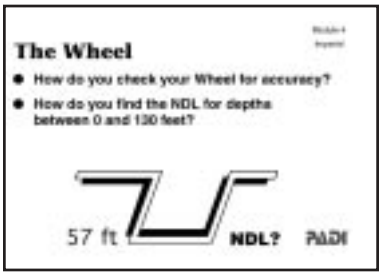
2. Set the depth: Point white triangle to exact or next greater depths

3. Find maximum NDL: Align pointer to NDL mark on depth curve, yellow triangle indicates NDL on outer yellow bottom time ring.

4-M. Metric sample problem: Your first dive of the day is to 17 metres, the depth of a famous reef known for its abundant fish life, seals and manta rays. What's the maximum allowable bottom time (no decompression limit—NDL) for this dive? [NDL = 56 minutes]



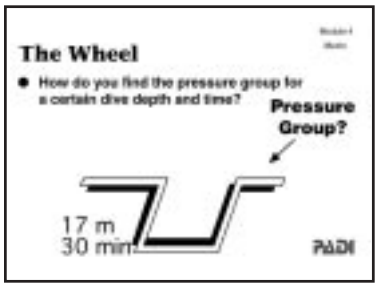
4-I. Imperial sample problem: Your first dive of the day is to 57 feet, the depth of a famous reef known for its abundant fish life, seals and manta rays. What's the maximum allowable bottom time (no decompression limit—NDL): for this dive? [NDL = 55 minutes]

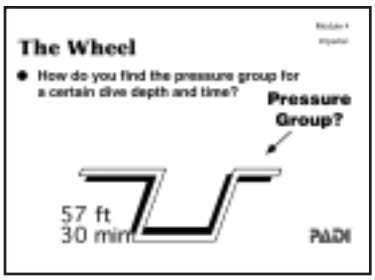


C. How do you find the pressure group for a certain dive depth and time?

1. To find a pressure group after a dive:

   a. With the *white* triangle pointing to the exact or next greater depth of a dive, point the *yellow* triangle to actual dive time.





b. Read up the pointer centerline from the yellow triangle and find where it crosses the appropriate depth curve.
c. Pressure groups are found in yellow circles with arrows extending from them.
d. Find the first arrow, *closest* to the yellow triangle, that *pierces*, not just touches, the appropriate depth curve. Remember- Yellow must always *pierce*.

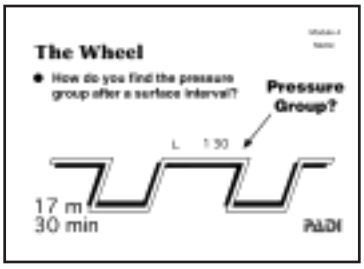
2-M. Metric sample problem: Continuing from the previous sample — After watching fish for 30 minutes, at a maximum depth of 17 metres, you notice that your SPG indicates you should ascend, which you do. What's your pressure group at the end of this dive? [pressure group = L]

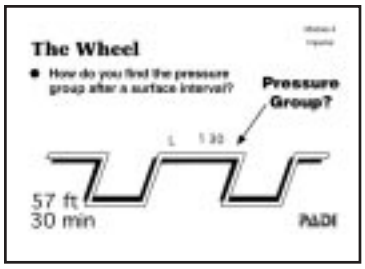
2-I. Imperial sample problem: Continuing from the previous sample — After watching fish for 30 minutes, at a maximum depth of 57 feet, you notice that your SPG indicates you should ascend, which you do. What's your pressure group at the end of this dive? [pressure group = L]

D. How do you find the pressure group after a surface interval?

1. Side Two features:
   a. Black pressure group dots
   b. Yellow surface interval time ring
   c. White surface interval curve—from center to outer ring
   d. Pressure group areas in two shades of blue
2. Find yellow pressure group (within black dot). Using the ending pressure group found from Side One.
3. Find the actual surface interval time between two dives on the yellow surface interval time ring.
4. Align the surface interval time on the ring with the pressure group found in the black dot.
5. Read up the line from the black dot toward the center of The Wheel.
6. The new pressure group is the white letter in the blue band where the white curve crosses the black line.

7. When the curve intersects two groups, read down to the greater group.
8. Sample problem: Continuing the previous sample—The weather is exceptional. After lunch, you and your buddy decide to make another dive on the same reef Just before you suit up, you notice that it's been l-hour, 30-minutes since you got out of the water. Using your Wheel and the pressure group after your first dive, "L," what's your new pressure group? [pressure group = B]

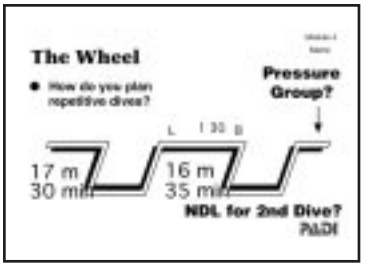




E. How do you plan repetitive dives?
1. Return to Side One
2. Rotate the white pressure group index line until the new current pressure group (from Side Two) *touches*, (not pierces) the depth curve for the depth of the repetitive dive. Note: Do not use white triangle to set depth.
3. Set yellow pointer as before on the actual bottom time of the repetitive dive.

4-M. Metric sample problems

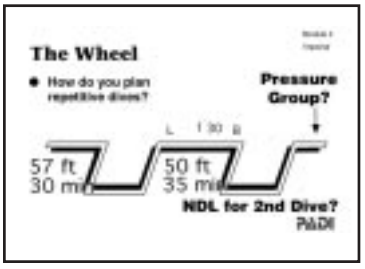
a. Finding the NDL prior to a repetitive dive. Continuing from the previous sample — On the first dive you noticed a shallower portion of the reef that you and your buddy could visit about 16 metres deep, which is where you saw several manta rays. As a group B diver after your surface interval, what's the maximum allowable time (NDL) you could watch manta rays? [NDL = 60 minutes]



b. Complete two dive profile. Continuing the previous sample—You now know that the maximum time you can watch the rays on this second dive is 60 minutes. However after watching them for 35 minutes at 16 metres, your SPG indicates you should ascend soon, so you decide to return to the surface. What is your new pressure group? [pressure group = Q]

4-I. Imperial sample problems

a. Finding the NDL prior to a repetitive dive. Continuing from the previous sample—On the first dive you noticed a



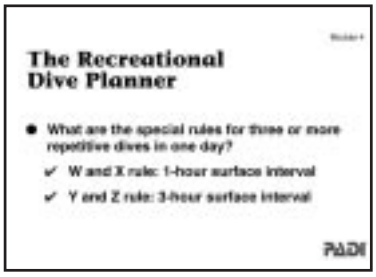
shallower portion of the reef that you and your buddy could visit about 50 feet deep, which is where you saw several manta rays. As a group B diver after your surface interval, what's the maximum allowable time (NDL) you could watch manta rays? [NDL = 67 minutes]

b. Complete two dive profile. Continuing the previous sample—You now know that the maximum time you can watch the rays on this second dive is 67 minutes. However after watching them for 35 minutes at 50 feet, your SPG indicates you should ascend soon, so you decide to return to the surface. What is your new pressure group? [pressure group = P]

F. What are the special rules for three or more repetitive dives in one day (when using the RDP)?

[*Highlight specific examples of when these rules might apply to actual dive situations: boat dives, dive vacations, etc.*]

1. If you are planning three or more dives in a day: Beginning with the first dive, if your ending pressure group after any dive is W or X, the minimum surface interval between all subsequent dives is one hour.
2. If your ending pressure group after any dive is Y or Z, the minimum surface interval between all subsequent dives is three hours.



Emphasis Note: Since little is presently known about the physiological effects of multiple dives over multiple days, divers are wise to make fewer dives and limit their exposure toward the end of a multiday dive series.

[If teaching The Wheel, skip the next segment to the summary.]

IV-B. Using the Recreational Dive Planner Table Version

A. How do you find the NDL, for any depth between 0 metres/0 feet and 40 metres/130 feet?

How do you find the pressure group for a certain dive depth and time?

1. Begin with table 1 to plan first dive of the day or whenever you plan a dive after six hours following a previous no decompression dive.

2. Table 1 features:
   a. Starting point
   b. Depths
   c. Bottom times
   d. No decompression limits
   e. Pressure groups

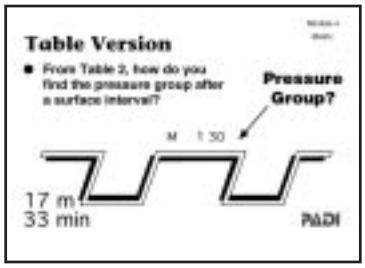
3-M. Metric sample problem:

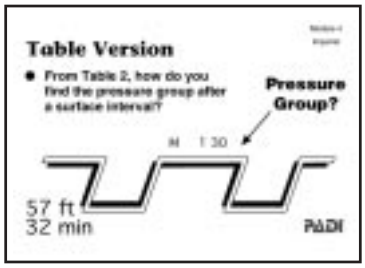
   a. Finding the no decompression limit (NDL.) after a dive. Your first dive is to 17 metres, the depth of a famous reef known for its abundant fish life, seals and manta rays. What's the maximum allowable bottom time (no decompression limit NDL) for this dive? [NDL = 56 minutes]
   b. Finding the pressure group after a dive. Continuing the previous sample — After watching fish for 33 minutes at a maximum depth of 17 metres, you notice that your SPG says you should ascend soon, so you end the dive. What's your pressure group at the end of this dive? [pressure group = M]

3-I. Imperial sample problem:

   a. Finding the no decompression limit (NDL.) after a dive. Your first dive is to 57 feet, the depth of a famous reef known for its abundant fish life, seals and manta rays. What's the maximum allowable bottom time (no decompression limit NDL) for this dive? [NDL = 55 minutes]
   b. Finding the pressure group after a dive. Continuing the previous sample — After watching fish for 33 minutes at a maximum depth of 57 feet, you notice that your SPG says you should ascend soon, so you end the dive. What's your pressure group at the end of this dive? [pressure group =M]

B. From Table 2, how do you find the pressure group after a surface interval?
   1. Used to determine how much residual nitrogen a diver eliminates during a surface interval.





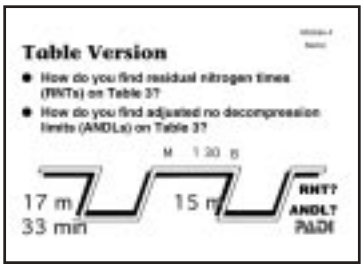
2. Enter Table 2 using the pressure group found in Table 1.
3. Find surface interval. Numbers in the boxes are times expressed in hours and minutes. Example: 1:30 = 1 hour and 30 minutes.
4. Move vertically to the bottom of Table 2 to find new pressure group.
5. Note: more time on the surface—less residual nitrogen; less time on the surface—more residual nitrogen. Remember, residual nitrogen is low in pressure group A and becomes greater as one moves to pressure group Z.
6. Continuing from the previous sample—The weather is exceptional. After lunch, you and your buddy decide to make another dive on the same reef. Just before you suit up you notice that it's been 1 hour, 30 minutes since you got out of the water. Using Table 2, what 's your new pressure group? [pressure group = B]

C. How do you find residual nitrogen times on Table 3 and how do you find adjusted no decompression limits on Table 3?
   1. Table 3 is used to find out how much residual nitrogen, expressed in minutes, a diver has remaining in the body prior to entering the water for a repetitive dive.
   2. This amount is referred to as residual nitrogen time (RNT).
   3. Enter Table 3 at the top, with the new pressure group found after the surface interval.
   4. Find the depth of the repetitive dive in the column on the left side.
   5. Intersect the depth row with the pressure group column. You will locate a box with two numbers.
   6. The RNT is the number in the white box.
   7. The adjusted no decompression limit (ANDL) is located in blue box. The Adjusted no decompression limit is the maximum time you can spend at that depth on the repetitive dive.
   8. The ANDL is the result of subtracting the RNT from the NDL for the depth of the repetitive dive.

9-M. Metric sample problems:

a. Finding the RNT before a repetitive dive. Continuing the previous sample — On the first dive, you noticed a shallower portion of the reef that you can visit, about 15 metres deep, where you saw manta rays. As a group B diver after your surface interval, what's your RNT? [RNT= 13 minutes]

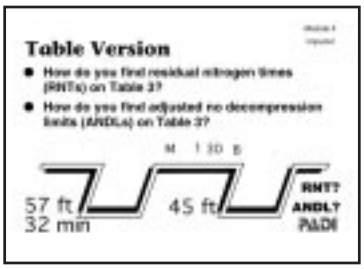
b. Finding the ANDL before a repetitive dive. Continuing the previous sample — What's your ANDL for this repetitive dive? [ANDL = 59 minutes]



9-I. Imperial sample problems:

a. Finding the RNT before a repetitive dive. Continuing the previous sample — On the first dive, you noticed a shallower portion of the reef that you can visit, about 45 feet deep, where you saw manta rays. As a group B diver after your surface interval, what's your RNT? [RNT= 13 minutes]

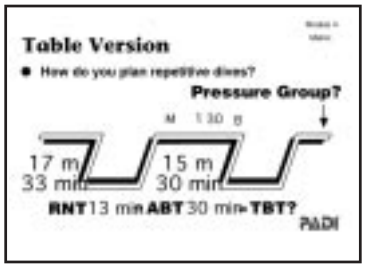
b. Finding the ANDL before a repetitive dive. Continuing the previous sample—What's your ANDL for this repetitive dive? [ANDL = 67 minutes]

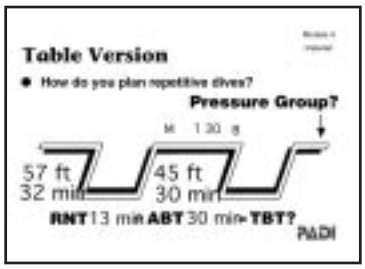


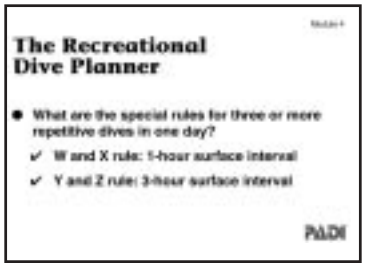
D. How do you plan repetitive dives?

1. When planning more than two dives a day, a diver needs to know how to get a new pressure group at the end of a repetitive dive.
2. Find the RNT after a repetitive dive on Table 3.
3. Add the RNT to the actual bottom time (ABT).
   a. Actual bottom time: The time actually spent underwater on the repetitive dive.
4. The sum of the RNT and ABT equals the total bottom time or TBT.
   a. Total bottom time: A time representing the amount of nitrogen a diver has in the body after a repetitive dive.
   b. RNT + ABT = TBT
   c. Forgetting to add RNT to ABT to get TBT is the single most common error made by divers learning to use the tables. Use this mnemonic to help you remember: Always find the RAT:

Residual Nitrogen Time (RNT)
+ **A**ctual Bottom Time (ABT)
Total Bottom Time (TBT)







5. Find the new pressure group on Table 1 by using depth of the repetitive dive and total bottom time (TBT).

6-M. Metric sample problem Continuing from the previous sample — Your second dive to 15 metres for 30 minutes couldn't have been better — you see a manta ray up close. Now that the dive is complete and you're back on the surface, what's your TBT and new pressure group? [TBT= 43; new pressure group = O]

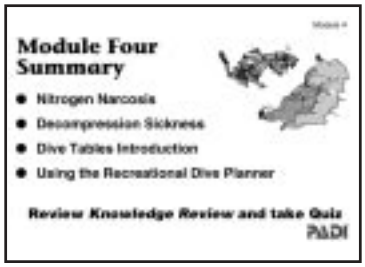
6-I. Imperial sample problem Continuing from the previous sample—Your second dive to 45 feet for 30 minutes couldn't have been better—you see a manta ray up close. Now that the dive is complete and you're back on the surface, what's your TBT and new pressure group? [TBT= 43; new pressure group = N]

E. What are the special rules for three or more repetitive dives in one day (when using the RDP)?

[*Highlight specific examples of when these rules might apply to actual dive situations: boat dives, dive vacations, etc.*]

1. If you are planning three or more dives in a day: Beginning with the first dive, if your ending pressure group after any dive is W or X, the minimum surface interval between all subsequent dives is one hour.
2. If your ending pressure group after any dive is Y or Z, the minimum surface interval between all subsequent dives is three hours.

Emphasis Note: Since little is presently known about the physiological effects of multiple dives over multiple days, divers are wise to make fewer dives and limit their exposure toward the end of a multiday dive series.



Summary

[*Review key points. Also, restate objectives as answers to questions and restate values.*]

Reminder for Knowledge Development Section Five

Finish the *Instructions for Use* for with the RDP Table or Wheel. This material is also in the *Open Water Diver Multimedia*.

Knowledge Development Five

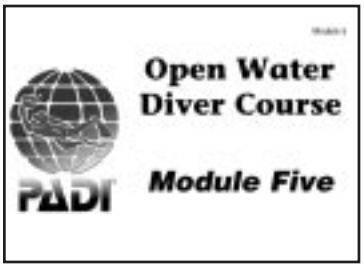
Training Aid Recommendations

1. Complete System Lesson Guides.
2. PADI Open Water Diver Video.
3. Giant RDPs.

Presentation

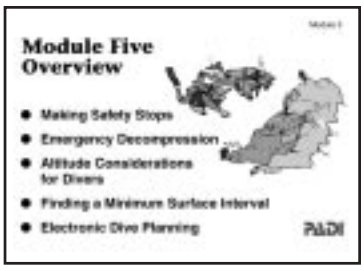
[Reminder: This is a review and elaboration. Move quickly over areas students know well based on their Knowledge Reviews and quiz scores. Spend more time where they had problems, where you need to add detail specific to your students and the local dive environment and where student divers express interest.]

Contact Suggestions



1. Ask students if they think they will ever be diving in cold water or flying to a dive destination. Most will probably answer "yes" to one or the other. Segue to the notion that to dive safely under these special circumstances, there are some steps to follow when planning dives with the Recreational Dive Planner.
2. Drawing from past experience, explain how making a safety stop prevented a possible problem (adjust ill fitting equipment, double checked table limits and dive time, looking for boats overhead, etc.) Emphasize safety stop benefits.
3. Tell students about the last time you traveled by air from a dive destination and applied the guidelines for flying and driving to altitude after diving.

Overview, Learning Objectives and Example Value Statements



I. Be a S.A.F.E. Diver - Making Safety Stops

- When must you make a safely stop?

  Understanding when safety stops are recommended and required helps you reduce the risk of decompression sickness.

II. Emergency Decompression

- What should you do if you accidentally exceed a no decompression limit?

Accidents happens. If you exceed the RDP or your computer's no stop limits, you need to know what to do to reduce your risk of decompression sickness.

III. Altitude Considerations for Divers

- Above what altitude should you use special procedures with the Recreational Dive Planner?
- What are the guidelines for flying after diving?

Altitude makes it easier for bubbles to form in your body after a dive, so you need to follow procedures to keep your decompression sickness risk tolerable.

IV-A. Using The Wheel—Finding a Minimum Surface Interval and Calculating a Multilevel Dive

[Use IV-A when teaching The Wheel. When working sample problems.]

- How do you find the minimum surface interval between two no decompression dives using The Wheel?
- How do you plan a multilevel dive with The Wheel?

Knowing how to use The Wheel to find a minimum surface interval will help you make the most effective use of your time when planning two or more dives.

IV-B. Using the RDP Table—Finding a Minimum Surface Interval

[Use IV-B when teaching the Table.]

- How do you find a minimum surface interval between two no decompression dives using the RDP Table version?

Knowing how to use the Table to find a minimum surface interval will help you make the most effective use of your time when planning two or more dives.

V. Computer Dive Planning

- What is a dive computer?
- How do you use a dive computer?

Dive computers have become very popular, and it's more unusual to see a diver without one than with one. Since diving with a computer has many benefits, you'll want to know how to use one.

Conduct

[*Ask divers to listen, to ask questions as necessary. Keep it light and fun.*]

Outline

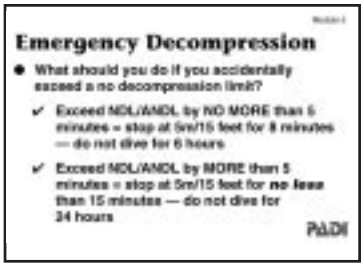
I. Be a S.A.F.E. Diver—Making Safety Stops

A. When must you make a safety stop?

1. After a dive to 30 metres/100 feet or deeper.
2. Your pressure group at the end of a dive is within three pressure groups of the no decompression limit (using the RDP).
3. When you dive up to any limit on the RDP or your dive computer.

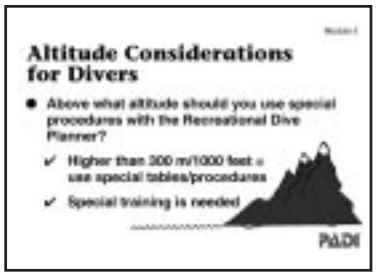
Emphasis Note: Make a safety stop after every dive. [*Explain PADI's S.A.F.E. Diver campaign—be a S.A.F.E. Diver—Slowly Ascend From Every dive, and make a safety stop after every dive.*]

II. Emergency Decompression



A. What should you do if you accidentally exceed a no decompression limit?

1. Using the RDP, if you exceed a no decompression limit or an adjusted no decompression limit by no more than five minutes, slowly ascend at a rate not faster than 18 metres/60 feet per minute to 5 metres/15 feet and remain there for eight minutes prior to surfacing. After reaching the surface, do not dive for at least six hours.
2. Using the RDP, if you exceed a no decompression limit or an adjusted no decompression limit by more than five minutes, slowly ascend at a rate not faster than 18 metres/60 feet per minute to 5 metres/15 feet and remain there for no less than 15 minutes prior to surfacing, air supply permitting. After reaching the surface, do not dive for at least 24 hours.
3. Using a dive computer, your computer will give you your emergency decompression requirements. After surfacing, remain out of the water as recommended by the manufacturer's literature. Making a repetitive dive after a dive requiring decompression is



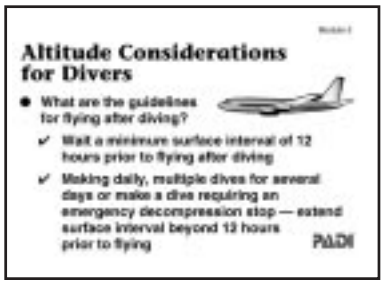
not generally recommended.

III. Altitude Considerations for Divers

A. Above what altitude should you use special procedures with the Recreational Dive Planner?

1. Diving at altitudes higher than 300 metres/1000 feet requires the use of special tables and procedures to account for decreased atmospheric pressure. To use a dive computer, see the manufacturer's literature—you may need to put the computer in a special altitude mode.
2. You need special training for altitude diving.

   [*Outline specific course procedures for diving at altitude if open water dives will take place above 300 metres/1000 feet and promote upcoming Altitude Diver specialty courses.*]



B. What are the guidelines for flying after diving?

1. For a single dive within the no decompression limit, a minimum preflight surface interval of 12 hours is suggested
2. For repetitive dives and/or multiday dives, a minimum preflight surface interval of 18 hours is suggested.
3. For dives requiring decompression stops, a minimum preflight surface interval greater than 18 hours is suggested.

   [*Show how you used these guidelines on a past dive trip.*]

Emphasis Note: There is currently no recommendation for driving to altitude after diving. Conservatism is prudent. Also, there can never be a flying after diving rule that is guaranteed to prevent decompression sickness completely. These guidelines represent the best estimate for a conservative, safe surface interval for the vast majority of divers. The responsibility for diving safely and proper behavior falls on you. Stay up on procedure changes over time as new research develops.

[If you are teaching the table version of the RDP, skip the next segment and go to IV-B.]

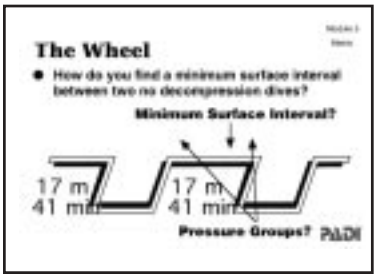
IV-A. Using The Wheel – Finding a Minimum Surface Interval and Calculating a Multilevel Dive

A. How do you find minimum surface interval between two no decompression dives using The Wheel?

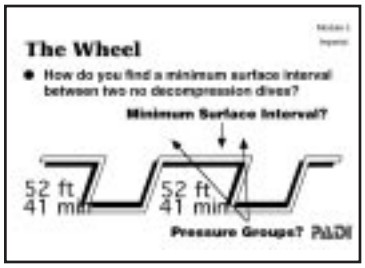
[*Explain that you find minimum surface intervals when planning repetitive dives with known depths (from previous dives, boat depth finders, charts, etc.). This allows one to calculate the least amount of time (the minimum surface interval) that you must wait after the first dive to be able to make a second dive for a desired time.*]

1. Set depth of first dive (Side One) using the white triangle.
2. Determine the pressure group at the end of the first dive.
   a. Point the yellow triangle to the actual dive time.
   b. Read up pointer centerline from yellow triangle to where it crosses the appropriate depth curve. Find pressure group in yellow circle-closest arrow to yellow triangle that *pierces*.
3. Determine the pressure group at the beginning of the second dive.
   a. Align desired dive time on yellow outer ring with NDL mark of desired depth curve.
   b. Read pressure group along the depth curve from white pressure group index.
4. Determine the minimum surface interval using Side Two.
   a. Find black dot corresponding to the pressure group at end of the first dive.
   b. Rotate wheel until white curve intersects shaded areas of the pressure group found from the beginning of the second dive.
   c. Read the minimum surface interval from the yellow outer ring above the black dot pressure group.

5-M. Metric sample problem: Your tropical dive vacation includes a popular wreck dive. From the depth finder, the boat captain gives you the depth, 17 metres, and informs you that you'll make two dives on this site. Your first dive is for 41 minutes. Since you're anxious



to get back in and see the rest of wreck, you want to know the minimum time you need on the surface to make another dive to 17 metres for 41 minutes. [pressure group after 1st dive = Q; pressure group at the beginning of 2nd dive = C; minimum surface interval =1:22]

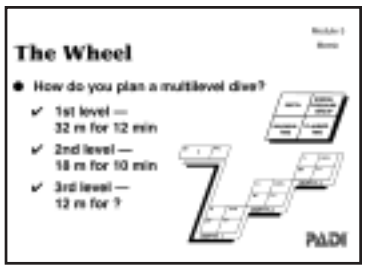


5-I. Imperial sample problem: Your tropical dive vacation includes a popular wreck dive. From the depth finder, the boat captain gives you the depth, 52 feet, and informs you that you'll make two dives on this site. Your first dive is for 41 minutes. Since you're anxious to get back in and see the rest of the wreck, you want to know the minimum time you need on the surface to make another dive to 52 feet for 41 minutes. [pressure group after 1st dive = P; pressure group at the beginning of 2nd dive = G; minimum surface interval =:46]

Emphasis Note: Determining minimum surface intervals means diving to the limits of the RDP. When using The Wheel to find minimum surface intervals, you can add some conservatism by using a lower pressure group (more toward pressure group "A") at the beginning of the 2nd dive. You can also determine a minimum surface interval, but then stay a bit longer than that interval when diving. Another way to be conservative is to limit the actual bottom time of your second dive to well within the time you plan. Remember to make a safety stop before surfacing.

B. How do you plan a multilevel dive using The Wheel?

[*Review with students, section Seven in The Wheel Instructions for Use and Study Guide.*]

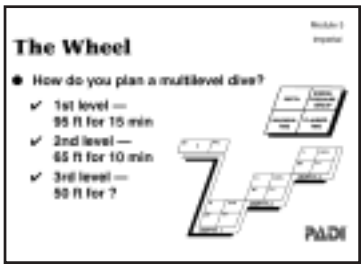


1-M. Metric sample problem: The dive boat you're on anchors over a beautiful reef with a variety of depth levels. As a PADI Advanced Open Water Diver, you're training qualifies you to dive to the depths at the site. You immediately plan the deepest depth of your dive for 32 metres. What's the NDL for this

depth? [NDL = 17 minutes] You decide to stay at 32 metres for 12 minutes. What pressure group does this yield? [pressure group = H] You plan to ascend next to 18 metres where you've been told you can find some corals. After the first level, what's the maximum time you can spend at 18 metres? [ML = 23 minutes] After 10 minutes at 18 metres, you plan to ascend to a third level. What pressure group would you have now? [pressure group = M] You decide to ascend to 12 metres. What's the maximum time you can spend at 12 metres? [ML = 76 minutes]

1-I. Imperial sample problem: The dive boat you're on anchors over a beautiful reef with a variety of depth levels. As a PADI Advanced Open Water Diver, you're training qualifies you to dive to the depths at the site. You immediately plan the deepest depth of your dive for 95 feet. What's the NDL for this depth? [NDL = 22 minutes] You decide to stay at 95 feet for 15 minutes. What pressure group does this yield? [pressure group = J] You plan to ascend next to 65 feet where you've been told you can find some corals. After the first level, what's the maximum time you can spend at 65 feet? [ML = 15 minutes] After 10 minutes at 65 feet, you plan to ascend to a third level. What pressure group would you have now? [pressure group = P] You decide to ascend to 50 feet. What's the maximum time you can spend at 50 feet? [ML = 20 minutes]

[*If you are teaching The Wheel, skip the next segment and continue this presentation with the topic: Computer Dive Planning.*]



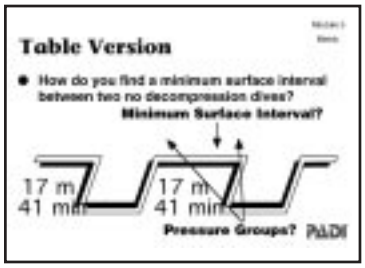
IV-B. Using the RDP Table — Finding a Minimum Surface Interval

A. How do you find a minimum surface interval between two no decompression dives with the RDP Table?

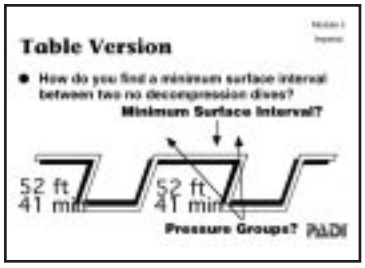
[*Explain that you find minimum surface intervals when planning repetitive dives with known depths (from previous dives, boat depth finders, charts, etc.) –*

Allows one to calculate the least amount of time (the minimum surface interval) that you must wait after the first dive to be able to make a second dive for a desired time.]

1. On table one, first find the pressure group at the end of the first dive.
2. On table three, locate the depth of the second dive on the left-hand side. Move horizontally from that depth across the table until you find the exact time, or next greater time, of the second dive in a blue box (this time will be an ANDL). Locate the pressure group above this time.
3. On table 2, intersect the pressure group found after the first dive with the pressure group found from table three. At that intersection on table two, you will find two numbers. The top number is the minimum surface interval.



4-M. Metric sample problem: Your tropical dive vacation includes a popular wreck dive. From the depth finder, the boat captain tells you the depth is 17 metres, and informs you that you'll make two dives on this site. Your first dive is for 41 minutes. Since you're anxious see the rest of wreck, you want to know the minimum amount of time you need on the surface to make another dive to 17 metres for 41 minutes. [pressure group after 1st dive = P; pressure group at the beginning of 2nd dive = C; minimum surface interval = 1:17]



4-I. Imperial sample problem: Your tropical dive vacation includes a popular wreck dive. From the depth finder, the boat captain tells you the depth is 52 feet, and informs you that you'll make two dives on this site. Your first dive is for 41 minutes. Since you're anxious to see the rest of wreck, you want to know the minimum amount of time you need on the surface to make another dive to 52 feet for 41 minutes. [pressure group after 1st dive = Q; pressure group at the beginning of 2nd dive = C; minimum surface interval = 1:21]

Emphasis Note: Determining minimum surface intervals means diving to the limits of the RDP. You can add some conservatism by using a lower pressure group (more toward pressure group "A") at the beginning of the 2nd dive. You can also determine a minimum surface interval, but then stay a bit longer than that interval when diving. Another way to be conservative is to limit the actual bottom time of your second dive to well within the time you plan. Remember to make a safety stop before surfacing.

V. Computer Dive Planning

A. What is a dive computer?

1. A dive computer is a specialized calculator that reads your depth and time and applies them to a decompression model to provide you with your no decompression time remaining.

   [*Show students a few dive computers, discussing features/benefits.*]

2. They also calculate multilevel dives (like The Wheel), which extends your no stop time beyond the no decompression limit of your deepest depth. Multilevel diving offers more time because it credits you for slower nitrogen absorption when you ascend to a shallower depth.

   [*Give examples of multilevel dives student divers might make.*]

3. A dive computer's primary purpose is to tell you your remaining no decompression time. All display depth, no decompression time remaining and elapsed time. Some include your SPG and calculate the amount of time remaining based on your air consumption.

B. How do you use a dive computer?

1. Follow the guidelines you learned with the Recreational Dive Planner (deep dives first, limit repetitive dives to 30 metres/100 feet or shallower, etc.)
2. You and your buddy need your own computers. Don't attempt to share. A computer

tracks your nitrogen throughout the dive day, so you can't swap or share computers between dives, either.

3. Don't turn your computer off between dives or remove the battery. Doing so will make it lose its memory of your residual nitrogen. Your computer will shut itself off.
4. Different computers have slightly different decompression models and different time limits. Buddy teams should follow the computer with the more conservative times.
5. If your computer malfunctions while diving, ascend immediately according to the manufacturer's instructions.

   [*Read students the guidelines specific to a malfunction for a computer.*]
6. Back up your computer with the Recreational Dive Planner. Since no dive computer is infallible, it is still important for you to have and use your RDP. If your computer fails you may have to quit diving until the next day to clear residual nitrogen, but then you can resume using your RDP. You may be able to rent a dive computer in many places, but don't count on it—take your RDP so you don't miss out on the diving.

   [Suggest the PADI Multilevel Specialty Diver course as a good way to learn more about computers, multilevel diving and decompression theory.]

VI. Your Next Adventure

[*Show students slides/videos of people having fun diving with your dive operation.*

Take time to get student divers to plan now for what they'll do after they become divers. Encourage them strongly to do one or more of the following:

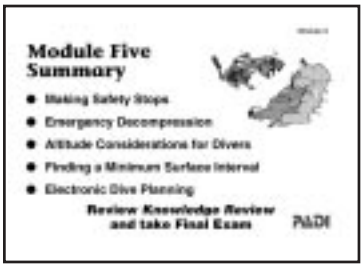
A. Join your dive operation's club and the PADI Diving Society
B. Sign up for an Adventure Dive.
C. Sign up for a course (Advanced or Specialty).
D. Sign up for a dive trip.
E. Sign up for a local dive with your dive operation.
F. Invest in a regulator and BCD setup, or an exposure suit.

Emphasize that divers who do one of these right after completing their certification tend to stay in diving, and get from diving what they want. Those who don't are more likely to go a long time without diving, or never dive again, wasting the time and money they've invested.

Encourage student divers to share names and contact information; this gives them some immediate contacts with others who dive.]

Summary

[*Review key points. Also, restate objectives as answers to questions and restate values.*]



Knowledge Development Performance Requirements

The following list includes all the Knowledge Development performance objectives (Study Objectives) of the Open Water Diver course stated as questions as they appear in the *Open Water Diver Manual*. This list puts the requirements in one place entirely for your reference and convenience. They're *not* intended for elaboration because the *Open Water Diver Multimedia* or *Manual* presents them to students during their independent study.

By the end of Section One, the student will be able to answer the following questions:

1. **What will the buoyancy of an object be (positive, neutral or negative) if it displaces an amount of water:**
   - **more than its own weight?**
   - **less than its own weight?**
   - **equal to its own weight?**
2. **What two items control a diver's buoyancy?**
3. **Why is buoyancy control, both at the surface and underwater, one of the most important skills a diver can master?**
4. **How does the buoyancy of an object differ in fresh water compared to salt water?**
5. **How does lung volume affect buoyancy?**
6. **Why do you usually only feel changing pressure in your body air spaces?**
7. **Why are pressure changes while ascending or descending underwater much more substantial than pressure changes when ascending or descending the same distance in air?**
8. **What is the relationship between increasing and decreasing depth and water pressure?**
9. **What are the absolute pressures, in atmospheres or bar, for:**
   - **10 metres/33 feet?**
   - **20 metres/66 feet?**
   - **30 metres/99 feet?**
   - **40 metres/132 feet?**
10. **What is the relationship between air volume and density, and how do they vary according to this relationship when pressure increases or decreases?**
11. **What are the three major air spaces affected by pressure?**
12. **What is a "squeeze?"**
13. **What is "equalization?"**
14. **What are three ways you can equalize air spaces during descent?**
15. **How often should you equalize during descent?**
16. **What three steps should you take if you feel discomfort in an air space while descending?**

17. What is the most important rule in scuba diving?
18. What are the consequences of breaking the most important rule in scuba diving?
19. What is a "reverse block?"
20. What should you do if you feel discomfort during ascent due to air expansion in the ears, sinuses, stomach, intestines or teeth?
21. How does increasing depth affect how long your air supply lasts?
22. What's the most efficient way to breathe dense air underwater?
23. Why does a diver need a mask?
24. Why does the mask need to enclose your nose?
25. What six features should you look for in a mask?
26. When selecting a mask, what are the two most important factors?
27. How do you prepare a new mask for use?
28. What three general maintenance procedures apply to mask care?
29. Why does a diver need a snorkel?
30. What three features does an easy-breathing snorkel have?
31. When selecting a snorkel, how do you check it for fit and comfort?
32. How do you prepare a new snorkel for use?
33. Why does a diver need fins?
34. What are the two basic fin styles?
35. What blade design features may enhance a fin's performance?
36. How do you prepare new fins for use?
37. What three considerations do you have when selecting a specific type of fin?
38. Why does a diver need a BCD?
39. Of the three styles of BCD, which is the most commonly used by recreational divers?
40. What five features do BCDs have in common?
41. How do you prepare a BCD for use?
42. What two special maintenance procedures apply to caring for a BCD?
43. Why does a diver need a scuba tank?
44. What are the three common sizes and the two materials for scuba tanks?
45. What five markings do you commonly find on the neck of a scuba tank?
46. What does a tank valve do?
47. What are the two basic types of tank valves?
48. What does a J-valve do, and why is its use declining?
49. What's the difference between a DIN valve and a yoke valve?
50. What is the purpose of a burst disk?

51. What three safety precautions for handling scuba tanks should you follow when going to and while at a dive site?
52. How do you turn a tank valve on and off?
53. What's the best way to keep water out of a scuba tank?
54. Why do you need scuba tank visual inspections and pressure tests?
55. Why do divers need a backpack?
56. With what piece of equipment is the backpack usually integrated?
57. What does a regulator do?
58. When looking at a regulator, which are the following parts:
    - first stage?
    - second stages?
    - dust cover?
    - purge button?
59. What's the most important feature for consideration when selecting a regulator?
60. How do you rinse a regulator after use, and what three points do you need to keep in mind while doing so?
61. Why do divers need a submersible pressure gauge?
62. What are three reasons for diving with a buddy at all times?

By the end of Section Two, the student will be able to answer the following questions:

1. How does looking at something underwater affect its apparent size?
2. How does water affect light intensity and color?
3. How does being underwater affect hearing?
4. How does the rate of body heat loss in water compare to the rate of body heat loss in air?
5. What should you do if you begin to shiver continuously underwater?
6. How should you move underwater to compensate for the increased resistance of water?
7. How do you breathe underwater for maximum efficiency?
8. What are eight symptoms of overexertion while diving?
9. How do you prevent overexertion while diving?
10. What should you do if you become overexerted while diving — either at the surface or underwater?
11. What are three techniques used for airway control?
12. What are the two reasons for wearing an exposure suit while diving?
13. How do dry suits and wet suits insulate divers?
14. Why must a wet suit fit snugly?

15. What two properties may an exposure suit lose due to increased water pressure at depth?
16. What three factors should you consider when selecting an exposure suit?
17. What four procedures apply to caring for an exposure suit?
18. Why do you need a hood and what are the three basic types of hoods?
19. Why should you avoid an excessively tight-fitting hood?
20. What are two reasons for wearing dive gloves?
21. What are three reasons for wearing wet suit boots while diving?
22. In what six ways can you prevent overheating before a dive when wearing an exposure suit?
23. What are two types of weight systems?
24. What's the most important feature of any weight system?
25. How do you determine how much weight you need for a dive?
26. What's an alternate air source?
27. What two types of alternate air source require the help and cooperation of another diver?
28. What type of alternate air source does not require the help and cooperation of another diver?
29. Why is it important to specially mark an extra second stage used as an alternate air source?
30. How and where should you attach your alternate air source?
31. Why do you need a low-pressure inflator?
32. Why do you need a dive knife or dive tool?
33. What three features should you consider when selecting a dive knife or dive tool?
34. Why do you need an equipment bag?
35. How do you pack an equipment bag before a dive?
36. What five types of reference information can you get from dive instruments?
37. What are two types of underwater timepieces used for diving?
38. Why do you need a depth gauge?
39. What is the purpose of a dive computer?
40. What are three reasons that you need an underwater compass?
41. What are two ways of gaining the attention of another diver underwater?
42. What are two ways of communicating with another diver underwater?
43. What are the 25 standard hand signals (visually) and what does each mean?
44. What should you do if you get an underwater recall?
45. What nine considerations should you discuss with your buddy when planning a dive?

46. **What are the steps of the predive safety check?**
47. **If you lose contact with your buddy underwater, what should you do?**

By the end of Section Three, the student will be able to answer the following questions:

1. **What six general environmental conditions can affect you in any aquatic environment?**
2. **How can you obtain an orientation to an unfamiliar aquatic environment?**
3. **How can you expect temperature to change with depth?**
4. **What's a thermocline?**
5. **How should you plan to dive in an area known to have a thermocline?**
6. **What's the definition of "underwater visibility"?**
7. **What four principle factors affect underwater visibility?**
8. **Restricted visibility can affect you in what three ways?**
9. **How do you avoid the problems associated with diving in clear water?**
10. **What four primary causes generate surface and underwater currents?**
11. **What should you do if you get caught in a current and carried downstream past a predetermined destination or exit point?**
12. **In most circumstances, which way should you go when there's a mild current present?**
13. **What should you do if you get exhausted and caught in a current at the surface while diving from a boat?**
14. **Aquatic bottom compositions include what six types?**
15. **What are the two ways to avoid bottom contact?**
16. **What are the two basic classifications for interaction between divers and aquatic life?**
17. **What causes nearly all injuries from aquatic life?**
18. **What should you do if you sight an aggressive animal underwater?**
19. **Nine simple precautions minimize the likelihood of being injured by an aquatic animal. What are they?**
20. **Why should divers follow local fish and game laws?**
21. **How can you prevent sunburn while out of the water (three ways), and what two ways can you use to prevent it while snorkeling?**
22. **What are the general considerations for diving in fresh water, and in salt water?**
23. **What creates surge and how do you avoid it?**
24. **What causes longshore currents, and how may they affect you?**
25. **Why would a wave break offshore?**

26. What causes a rip current, and how do you know when there's one present?
27. What should you do if you get caught in a rip current?
28. What causes an upwelling, and how might it affect local offshore dive conditions?
29. Tidal movement changes what three environmental conditions?
30. What's generally the best tidal level for diving?
31. You need to plan your dives for what three reasons?
32. What are the four stages of proper dive planning?
33. What five general steps do you follow during the advanced planning stage of dive planning?
34. What four general steps do you follow during the preparation stage of dive planning?
35. What five steps do you follow during the last-minute preparation stage of dive planning?
36. What seven steps do you follow during the pre-dive planning stage of dive planning?
37. What are three benefits of diving from a boat?
38. When preparing for a boat dive, what five general considerations apply to equipment preparation?
39. Before a boat dive, what four general considerations for personal preparation apply?
40. What part of the boat is:
    - bow (forward)?
    - stern (aft)?
    - starboard?
    - port?
    - leeward?
    - windward?
    - bridge?
    - head?
    - galley?
41. By what four ways can you minimize the effects of motion sickness while on a boat?
42. By what three ways can you prevent or control most dive problems that occur at the surface?
43. What should you do if a dive related problem occurs at the surface?
44. How do the appearance and actions of a diver who is under control differ from the appearance and actions of a diver who has, or is about to have, a problem involving panic?
45. What are the four basic steps to assisting another diver?
46. By what three ways can you prevent or control most diving problems that may occur underwater?

47. What are four problems that may occur underwater?
48. What, in order of priority, are the five low-on-air/out-of-air emergency procedures?
49. How do you breathe from a free-flowing regulator?
50. What should you do if you become entangled underwater?
51. What are the four general procedures for dealing with an unresponsive diver in the water?

By the end of Section Four, the student will be able to answer the following questions:

1. What are five uses for a surface float?
2. What do you do to avoid entanglement in a line connected to a surface float?
3. Why should you use a dive flag when diving?
4. How close should you stay to a dive flag, and how far should boats, skiers and water craft stay away if there are no local laws governing these distances?
5. What three features does a typical collecting bag have, and why would you have a collecting bag?
6. You might take an underwater light on a dive during the day for what two reasons?
7. What are two reasons for carrying an underwater slate as a regular part of your dive gear?
8. Why should you take a spare-parts kit with you when you dive?
9. What do you put in a spare-parts kit?
10. There are three primary reasons for keeping a log book. What are they?
11. What three substances should you avoid using prior to diving?
12. How often is it recommended that you have a complete physical examination by a physician?
13. What two immunizations should divers keep up-to-date?
14. What can you do to maintain your dive skills, or restore them after inactivity?
15. What effect does menstruation have on diving?
16. Why is it recommended that pregnant women not dive?
17. What two primary gases make up air?
18. What are five possible symptoms of contaminated air?
19. What should you do for a diver suspected of breathing contaminated air?
20. How do you prevent problems with contaminated air?
21. How do you prevent problems with oxygen?
22. What are five symptoms of nitrogen narcosis?
23. What should you do if nitrogen narcosis becomes a problem?
24. How do you prevent nitrogen narcosis?

25. **What two primary factors influence the absorption and elimination of nitrogen in a diver?**
26. **What condition occurs when a diver exceeds established depth and time limits, producing bubbles in the body during and following ascent?**
27. **What nine secondary factors can influence the absorption and elimination of nitrogen from the body?**
28. **What signs and symptoms are associated with decompression sickness?**
29. **What is meant by decompression illness versus decompression sickness?**
30. **What is the necessary treatment for a diver suspected of having decompression illness?**
31. **What is the first aid procedure for assisting someone with decompression illness?**
32. **How do you avoid decompression sickness?**
33. **What is the primary use of dive tables and dive computers?**
34. **What are meant by no decompression/no-stop diving and decompression diving?**
35. **What is a no decompression limit (NDL)?**
36. **Why should you avoid the maximum limits of dive tables and dive computers?**
37. **Why is your body nitrogen level higher after a repetitive dive than if you made the same dive as a nonrepetitive dive?**
38. **What is a repetitive dive?**
39. **How does the Recreational Dive Planner distributed by PADI differ from other dive tables?**
40. **What is bottom time?**
41. **What are the general rules for using the Recreational Dive Planner, and how do you apply them?**
42. **What is the maximum depth limit for all recreational diving?**
43. **How do you find the NDL for any depth between 0 and 40 metres/130 feet using the Recreational Dive Planner?**
44. **What is residual nitrogen?**
45. **What is a pressure group?**
46. **How do you find the pressure group for a certain dive depth and time using the Recreational Dive Planner?**
47. **What is a surface interval (SI)?**
48. **How do you find the pressure group after a surface interval using the Recreational Dive Planner?**
49. **What is residual nitrogen time (RNT)? [For teaching Table version only]**
50. **How do you find residual nitrogen times on Table 3 of the Recreational Dive Planner (table version), for particular depths and pressure groups?** [For teaching Table version only]

51. What is an adjusted no decompression limit?
52. How do you find an adjusted no decompression limit on Table 3 of the Recreational Dive Planner, for particular depths and pressure groups? [For teaching Table version only]
53. What is a dive profile?
54. In drawing a three-dive profile, where do you label:
    - surface intervals?
    - pressure groups?
    - depths?
    - bottom times?
55. What is actual bottom time (ABT)? [For teaching Table version only]
56. What is total bottom time (TBT)? [For teaching Table version only]
57. How do you calculate the total bottom time of a repetitive dive? [For teaching Table version only]
58. How do you find the final pressure group after making multiple repetitive dives using the Recreational Dive Planner?
59. What are the two special rules for repetitive diving?
60. What are the minimum surface intervals that must be made when planning three or more dives when:
    - the ending pressure group after any dive is W or X?
    - the ending pressure group after any dive is Y or Z?

By the end of Section Five, the student will be able to answer the following questions:

1. What are the recommended depth and time for a safety stop?
2. What's the purpose of a safety stop?
3. What are three situations in which a safety stop is considered required?
4. What should you do if you exceed a no decompression limit or an adjusted no decompression limit by five minutes or less when using the RDP?
5. What should you do if you exceed a no decompression limit or an adjusted no decompression limit by more than five minutes when using the RDP?
6. How do you determine emergency decompression requirements with a dive computer?
7. Above what altitude do you need to use special dive procedures?
8. What are the recommendations for flying in a commercial airliner after diving?
9. What are the procedures for planning a dive in cold water or under strenuous conditions?
10. How do you find the minimum surface interval required to complete a series of no decompression dives using the Recreational Dive Planner?

11. How do you plan a multilevel dive with The Wheel? [If teaching The Wheel.]
12. What procedures and general recommendations apply to diving with a computer?
13. What are the four basic features of an underwater compass?
14. What is the proper hand and arm position when using a compass mounted on the wrist?
15. What is the proper method of holding a compass when it is mounted in an instrument console?
16. How do you set an underwater compass to navigate a straight line from a beginning location to a predetermined destination?
17. How do you set an underwater compass for a reciprocal heading?
18. What is the purpose of the PADI System of diver education?
19. What are three benefits of continuing your diver education beyond PADI Open Water Diver?

Four Open Water Dives

By combining and applying what they learn in the Knowledge Development sections and the Confined Water Dives, the Open Water Dives introduce Scuba Divers and Open Water Divers to the open water environment. Although they've already practiced the skills they'll perform, the presence of new variables and conditions makes the Open Water Dives the most important parts of the course. Besides being a learning experience, for many students this will be their first introduction to the adventure and excitement diving offers, so it's important to provide an enjoyable experience that leaves them wanting more — not one they're glad they got through and don't have to repeat.

Standards, Recommendations and Procedures

The Open Water Diver course requires four open water scuba dives. You must conduct these with the required sequence and skills as outlined in this section of this instructor guide. The Scuba Diver course requires two open water scuba dives. You may rearrange skills within a dive, but you may not delete a skill or shift it from one dive to another except as noted.

The four scuba dives are called Open Water Dives 1, 2, 3 and 4. There is also an Optional Skin Dive. **Student divers must demonstrate mastery of performance requirements in each dive before progressing to the next. During the Open Water Dives, mastery is defined as performing the skill so it meets the stated performance requirements in a reasonably comfortable, fluid, repeatable manner as would be expected of a typical Open Water Diver.** As in confined water, barely managing to meet a performance requirement does not meet the definition of mastery. A beginning diver isn't expected to perform skills without stress, but you should be confident that the student can perform the skill reliably.

If, due to circumstances (such as running low on air, getting cold, etc.) students don't complete all the skills in a training dive, you may conduct them as the first skills in the next dive. If task loading may be an issue, it's recommended that you and your students make a separate dive to finish uncompleted skills prior to the next Open Water Dive in the sequence.

Supervision and Ratios

These ratios are maximums. It is often appropriate to use judgment and lower ratios depending on a variety of factors. During all open water dives, student divers must remain under the supervision of a Teaching status PADI Instructor. Student divers may not be left unattended either at the surface or underwater.

A Teaching status PADI Instructor must complete all skill evaluations, with the exception of those that may be evaluated by a PADI Assistant Instructor. Students must remain under your direct supervision during Open Water Dive 1.

The maximum ratio of student divers to instructor during the open water dives for this course is 8 students to 1 instructor, with a certified assistant for each two additional students, to a maximum of 12 student divers. You may use more than two certified assistant, but the maximum number of student divers remains at 12.

Note: If conducting the Open Water Dive for Discover Scuba Diving participants, the maximum ratio is 4 to 1, with 2 additional participants allowed with the use of a certified assistant. You may use more than one certified assistant, however, the maximum number of participants is 6.

During any open water training dive that includes children aged 10-11, the maximum instructor-to-student diver ratio is 4:1. No more than two children aged 10-11 may be included in the group of four student divers. You may not increase this ratio with the use of certified assistants.

Certified assistants may independently guide students during the exploration ("tour") portion of Open Water Dives 2, 3 and 4 at a ratio of 2 student divers to 1 certified assistant, under your indirect supervision.

Certified assistants may also accompany student divers during surface swims to and from the entry/exit point, and remain with students at the surface or underwater while the instructor conducts a particular skill (such as an ascent) with an individual student. Certified assistants may also accompany students during navigation exercises in Open Water Dives 3 and 4.

PADI Assistant Instructors may evaluate specific skills: 25 metre/yard tired diver tow, snorkel/regulator exchange, buoyancy check, cramp removal, surface compass navigation, remove and replace scuba unit at the surface and remove and replace weight system at the surface.

Required Equipment

During open water scuba training for the Open Water Diver and Scuba Diver courses, student diver equipment requirements are fins, mask, snorkel, compressed air cylinder with valve, BCD with low pressure inflator, regulator, alternate air source, submersible pressure gauge, weight system and appropriate exposure protection for the environment. Each diver must have a depth gauge. The alternate air source and depth gauge are optional in Open Water Dive 1, but recommended. Students may use dive computers as a depth gauge. It's recommended that each diver have a timer and compass.

When student divers will use dry suits during Open Water Training Dives, they must complete a confined water dry suit orientation session prior to any open water training.

Open Water Dive 1

This is the first dive in open water. The skills practiced are the skills normally used in diving. It is a tour that acclimates student divers to the new environment without task loading and introduces them to the underwater world without the formality of staged skills practice. Although the entire dive is a tour, keep in mind that students are learning a tremendous amount as they apply the essential skills required to simply dive. This dive should be as interesting and fun as possible.

At your discretion, students entering the Open Water Diver or Scuba Diver courses after completing the Discover Scuba Diving program may be credited for completing this dive (in addition to credit for completing Confined Water Dive 1). **It is your responsibility to ensure these student divers are adequately prepared for the next training sessions. If not, remediate as necessary.**

Prerequisites

There are several prerequisite options for participating in Open Water Dive 1. The intent is to give you maximum flexibility to accommodate class sizes, schedules and the opportunity to get student divers diving quickly.

Option 1

Student divers who successfully complete the Discover Scuba Diving Instructor Presentation and the Water Skill Development Session may participate in the Discover Scuba Diving experience (equal to Open Water Dive 1).

Using Discover Scuba Diving standards for open water, the maximum ratio is 4 students to 1 instructor, or 6 students to 1 instructor with one or more certified assistants.*

Option 2

Student divers who successfully complete Knowledge Development Session One (including quiz) and Confined Water Dive One may participate in Open Water Dive 1. The maximum ratio is 4 students to 1 instructor, or 6 students to 1 instructor with one or more certified assistants. *

Option 3

Students who successfully complete Knowledge Development Sessions One, Two and Three and Confined Water Dives One, Two and Three may participate in Open Water Dive 1. The maximum ratio is 8 students to 1 instructor, or 10 students to 1 instructor and 1 certified assistant, or 12 students to 1 instructor and 2 or more certified assistants.*

*Note: 4:1 if children aged 10-11 are in the group. No more than two children aged 10-11 may be included in the group of four student divers.

Open Water Dives 2, 3 and 4

These dives include skills that student divers practice and apply in open water.

Student divers may participate in Open Water Dive 2 after they successfully complete Knowledge Development Sections One through Three (including quizzes) and Confined Water Dives One through Three. They may participate in Dives 3 and 4 after they successfully complete all Knowledge Development (including Quizzes) and all Confined Water Dives. Students must successfully meet the performance requirements of the previous dive's skills before beginning the next dive's skills.

If issuing a referral, students must successfully meet all the performance requirements for a dive before the instructor signs the dive as complete on the Open Water Diver Referral Record Sheet.

Optional Skin Dive

Though not required, this optional dive introduces students to skin diving in open water. You may conduct the Optional Skin Dive anywhere in the dive sequence.

Recommendations

1. Include students in your dive planning. This is your opportunity to teach them to evaluate conditions and begin developing good judgment with respect to deciding whether or not to dive and what techniques to use.
2. A class dives as a group, but be sure students practice and apply the buddy system.
3. Be careful for signs of student stress. Because they're not experienced divers, student divers may tire more quickly, chill more quickly and experience more anxiety. Keep in mind that what's routine for you may be neither easy nor obvious to them.
4. Be conspicuous with role model activities. Experienced divers run through predive safety checks and dive table use so quickly that it's easy for others to miss. Student divers learn as much by what they see you do as by what you tell them, so make it easy for them to see your good habits. Keep in mind that they will pick up bad dive habits just as easily — so don't have any.
5. Be sure all staff members know their duties, are aware of emergency procedures for the dive site and know where to find emergency equipment.
6. It's a good idea to practice and review complicated skills, such as the controlled emergency swimming ascent (CESA) or new skills, such as compass use, before getting in the water.
7. Evaluate conditions carefully and set ratios carefully. Decrease ratios if conditions warrant. Use good judgment and err on the side of caution. Students may be disappointed by cancellation, but they learn a powerful lesson — when conditions aren't adequate, you don't dive.
8. Assure that student divers have and use equipment properly set up to eliminate unnecessary drag and reduce incidental damage to the aquatic environment. Suggestions to consider in meeting this include:
   - The alternate air source is located in the triangle formed by the chin and the corner of the rib cages, in plain sight, secured so it doesn't dangle, and available for use with a firm tug.
   - The SPG/console is properly secured so that it doesn't drag or dangle, and so that it doesn't come loose easily.
   - When swimming in a horizontal position, nothing protrudes (hangs) significantly below the diver. Protruding no more than 20 cm/8 in. is the recommended maximum.
9. **Students must log each dive in a personal log book, and you must personally sign each log entry (signature stamps not permitted).** It's recommended that you set a role model example by having a student sign your log entries.
10. Remember that student divers want to have fun. The dives aren't merely exercises to survive, but the door to a wonderful activity. *New divers have left scuba for good because of unpleasant conditions during their training in open water.* Don't let that happen to *your* students.

Site, Depths and Hours

You must conduct the Open Water Dives at a dive site with conditions and environment suitable for beginning divers. The maximum planned depth for Open Water Dives 1 and 2 must not exceed 12 metres/40 feet. The maximum planned depth for Open Water Dives 3 and 4 must not exceed 18 metres/60 feet (12 metres/40 feet for 10 and 11-year-old Junior Divers).

All dives for the Open Water Diver and Scuba Diver courses must take place during daylight hours.

Student divers may participate in a maximum of three open water scuba dives in a single day. These dives may be a combination of required training dives and additional excursion dives. **The following requirements apply:**

- **If student divers participate in confined water training that day, they may complete no more than two open water dives.**
- **Prior to the completion of Dive 3, the maximum planned depth for an excursion dive is 12 metres/40 feet.**
- **The maximum depth for the third dive of the day is 12 metres/40 feet.**

You may conduct the Optional Skin Dive in addition to these dives, and the recommended Adventure Dive may be the third dive after Open Water Dive 4.

Selecting Training Locations

How you select an appropriate training site for the open water dives is important, but not necessarily simple. On the one hand, you want a location that's easily supervised and safe, but on the other hand, you don't want a site that's so sterile that it doesn't represent the realities of diving in open water. You want a location that is safe and within student capabilities, but still represents the environment a novice diver would visit in the local area. Be particularly cautious not to exceed the maximum depth limitations and obviously avoid sites with known hazards like entanglement or entrapment. Keep in mind that just going into the dive environment adds mental and physical stress in addition to the skills students must demonstrate, so be cautious to avoid overloading students by adding difficult entries and exits, or other special techniques, on top of the already present task load.

Also, be aware that after certification, divers often return to dive the sites where they trained. Consequently, choose sites that are appropriate for a newly certified diver without an instructor present. If in doubt about the appropriateness of an open water training site, contact your PADI Office for guidance.

Accommodating People with Disabilities

To earn the PADI Open Water Diver or Scuba Diver certification, student divers must demonstrate mastery of each performance requirement. However, you have the latitude to accommodate individual needs by modifying techniques to meet the requirements.

Dive Flexible Skills

(Skills That May Be Shifted Between Dives)

The following lists the skills that you may conduct during any Open Water Dive (except as noted) at your discretion, **provided students have mastered the skills during the confined water dives.** *These skills appear in parenthesis in the dive overview for the suggested dive and suggested sequencing in the dive, but you may schedule them based on logistic needs.*

Note that some of these skills are required for the Scuba Diver certification.

Controlled Emergency Swimming Ascent (CESA) in Open Water

- You have the option of conducting the Controlled Emergency Swimming Ascent (CESA) during Open Water Dives 2, 3 or 4.
- **If receiving Open Water Diver students on referral between Open Water Dives, or completing the Open Water Diver course for Scuba Divers, or otherwise completing Open Water Diver certification for students for whom you have not conducted all the Open Water Dives, it is your responsibility to be sure students have met the performance requirements for the skill.**

CESA Performance Requirement

The student will perform a controlled emergency swimming ascent from a depth of 6-9 metres/20-30 feet and establish positive buoyancy at the surface. This exercise must be conducted as outlined.

The objectives of controlled emergency swimming ascent training are twofold: To develop student ability to reach the surface independently in an emergency situation; and to build student confidence in the ability to independently cope with an abrupt air loss.

The controlled emergency swimming ascent is recommended as the primary independent emergency option in the event of an abrupt apparent termination of air during a scuba dive at depths of 9 metres/30 feet or less in which a diver with an alternate air source is not immediately available.

The diver selects this course of action depending on many variables, including depth, distance from others, focus of attention of others and so on. Before choosing to perform a controlled emergency swimming ascent, the diver should stop, think, act by attempting to breathe, and if able to do so, proceed with a normal ascent.

Briefing the Skill

During the briefing for the dive when you will conduct CESA, cover all aspects of the exercise with students. This includes specific signals for the exercise, with a predive "dry run" recommended.

Instruct students to:

- **Retain the regulator in their mouths**
- **Not attempt to drop their weights**
- **Not use the control line for assistance — the line is for the instructor to use only, for emergency stopping and control**
- **Maintain a normal ascent rate**
- **Make a continuous sound (aaahhhh) throughout the ascent**
- **Resume normal breathing if you stop the ascent, of if they experience any difficulty.**

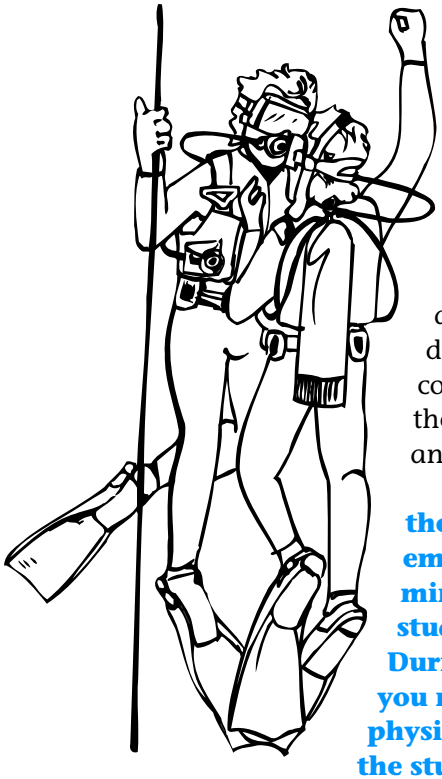
- Orally inflate the BCD upon reaching the surface

It helps to remind students that they practiced this skill during the Confined Water Dives.

Setting Up the Exercise

You must use a vertical control line that is buoyed by a surface float (recommended - at least 13 mm/$^1/_2$ inch in diameter for ease in grasping)**.**

Ensure that the line is either tied off firmly at the bottom or held down with sufficient weight to enable you to stop the ascent at any time by grasping it with a hand or leg wrap while holding the student firmly. These measures assure that you can stop the ascent if the diver doesn't exhale continuously, holds the breath or has any other problem.



You conduct the controlled emergency swimming ascent one student at a time. During this skill, you must maintain physical contact with the student and the control line.

Site

Select a site with a depth of at least 6 metres/20 feet but not exceeding 9 metres/30 feet. Controlled emergency swimming ascent training should be conducted under favorable environmental conditions. Avoid adverse conditions such as heavy surge, heavy surf, excessive depth or strong current. Use good judgment when selecting a suitable site.

Conducting the Exercise

Avoid conducing CESA as the first skill of the dive. Instead, conduct other exercises or lead a tour to allow students time to acclimate to the surrounding conditions.

Before initiating the ascent, make sure the student is neutrally buoyant. The fin pivot exercise is one way to do this.

Perform the exercise as follows:

1. **Grasp the student with one hand and maintain contact with the line.** This step orients you and the student to the line and each other. Grasp a point on the student that provides firm control. You may choose to keep a hand on the line or use a leg wrap for line orientation. It is important to maintain a point of control on the line in the event it is necessary to stop the ascent.
2. **Give the up signal, and the ascent commences, the student begins to exhale.** Maintain contact with the line and student

while giving the up sign (see Figure 1). The student shouldn't exhale before leaving the bottom (blow-and-go), but should exhale slowly and continuously throughout the ascent. (An excellent method to assure the proper rate of exhalation is to have the student to look up to open the airway, and say "aaahhhh" all the way to the surface. Students should understand they want to maintain a neutral lung volume, not a high or low lung volume.

3. **The student kicks to start, then reduces effort and continues kicking.** The student doesn't use the control line during the ascent. Ensure that the student keeps the regulator and weights in place. The student's air remains turned on throughout the exercise. Don't help the student ascend.

4. **The student maintains contact with the BCD or dry-suit deflator mechanism to vent excess air during ascent.** During the ascent, the student will become more buoyant due to expanding air in the BCD. Remind students during the briefing that in an actual emergency, they only ditch weights if any doubt exists about their ability to reach the surface.

5. **Observe and maintain control during the ascent**. During the ascent, the student should be held near and just below you. This position allows you to listen for the student's aaahhhh sound and tends to make the student look up toward you. Watch to be sure the student exhales continuously. Stop the ascent if there is any doubt. If you must interrupt the ascent, have the student repeat the exercise from the beginning.

6. Upon surfacing, have the student orally inflate the BCD, and observe the student for a couple of minutes before engaging in other training exercises.

CESA for Divers with Disabilities

Some students may not be able to kick to start the ascent as listed in step 3. The intent is to initiate the ascent; in the case of a student diver with little or no ability to move the legs, another propulsion technique that accomplishes this purpose is fine. For example, forceful arm thrusts or arm swimming.

Oral or low-pressure BCD inflation, or buddy assistance, *do not* accomplish the goal because the student is learning to respond to an out of air situation *independently.*

During the ascent: As long as you can hear the aaahhhh sound and see bubbles escaping, you can be sure that the student is exhaling. Establish signals beforehand so you can communicate if the student holds the breath.

If, for any reason, you stop the ascent using the control line, signal the student to resume breathing. You can make use of both hands while maintaining depth by wrapping a leg around the line (see Figure 2). Brief students that they may resume breathing at any time if they feel a need to do so. You want to observe closely during this training exercise so you prevent any problem, rather than react to one after it occurs.

Use a maximum ascent rate of 18 metres/60 feet per minute or slower, although in an actual emergency this rate would probably be exceeded. Limiting the ascent rate maintains greater safety and control, and you can point out to student divers that ascents from deeper depths at faster rates could be made in the same time. After reaching the surface, have students practice orally inflating their BCDs.

Cramp Removal

Performance Requirement

(Assistant Instructor may evaluate.)

Perform a simulated cramp release for self and buddy at the surface. This skill is required for Scuba Diver certification.

Have student divers practice releasing a leg cramp at the surface by pulling on fin tip and by pressing against fin held firmly by buddy, like they did in the confined water dives.

Tired Diver Tow

Performance Requirement

(Assistant Instructor may evaluate.)

Tow a simulated tired buddy 25 metres/yards on the surface in scuba equipment. This skill is required for Scuba Diver certification.

Have divers take turns simulating assisting a tired buddy by using a tank valve tow, modified tired swimmer's carry, etc. for 25 metres/yards.

50 Metre/Yard Straight Line Surface Swim With Compass

Performance Requirement

(Assistant Instructor may evaluate.)

Perform a 50 metre/yard surface snorkel swim in a straight line keeping the face in the water and using the compass only for direction reference.

This skill introduces student divers to compass use. Before having students navigate with a compass in the water, begin with land practice during the briefing. In your briefing, show students:

- how to establish and set a course and the reciprocal heading
- how to align the body with the centerline of the compass
- the need to look over, rather than down on the compass while navigating.

Have them practice these points by walking a line with a compass. In the water, have the compass-using buddy lead, swimming on a predetermined heading toward a distant object. The diver may use a specified number of kick cycles to estimate the required distance and does not look up to check position during the exercise. After traveling 50 metres/yards, the student's buddy (not using the compass) signals and they switch roles, navigating back to the start on a reciprocal heading. Encourage each diver to have a compass, but require at least one compass per dive team.

Snorkel/Regulator Exchange

Performance Requirement

(Assistant Instructor may evaluate.)

1. **Clear water from the snorkel at the surface and resume breathing without removing the snorkel from the mouth.**
2. **Alternately breathe from snorkel and regulator at the surface without lifting the face from the water.**

This skill is required for Scuba Diver certification.

Chances are student divers have been performing these skills repeatedly during all dives, but this gives you the opportunity to formally assess their skills. You may combine the skills and have students blast clear their snorkels as they switch back and forth to their regulators.

Remove and Replace Weight System and Scuba Unit at the Surface

Performance Requirement

(Assistant Instructor may evaluate.)

1. **Remove and replace the weight system at the surface in water too deep to stand up in.**
2. **Remove and replace the scuba unit at the surface in water too deep to stand up in.**

These exercises establish student ability to handle entries and exits that require putting equipment on and taking it off in the water.

One option is to meet this performance requirement by making it part of the entry and exit.

At the start of the dive, have student divers enter the water without their scuba units and weight systems. Buddies or assistants hand in their scuba units, or they're tied on a line, etc., to don in the water. They do the same next with their weight systems.

At the end of the dive, have students remove their weight systems first and hand them up, tie them to a line, etc. Next they remove their scuba units and hand them up/tie them to a line, etc. Fins remain on through the exercise.

Some weight systems require donning prior to the scuba unit, and cannot be removed (without using the quick release) prior to removing the scuba unit. Though this shouldn't be a problem if the diver is weighted properly, have someone attend students using such systems in the water, with a buoyancy source immediately available.

BCDs with weight integrated systems accomplish the weight and scuba unit removal and replacement requirement simultaneously.

Underwater Navigation with Compass

Conduct the Underwater Navigation with Compass skill on either Dives 2, 3 or 4.

Performance Requirement

Perform a navigation swim with a compass underwater in a straight line out and back on a reciprocal course (each diver navigates out and back).

Begin this exercise at a fixed reference point such as the descent or anchor line. Have buddy teams, accompanied by you (or a certified assistant at a 2:1 ratio), navigate on a predetermined heading out from the reference for a specified number of kick cycles (10 to 20), then turn and follow the reciprocal heading back to the reference point.

Have students stay on the bottom, which provides another reference besides the compass. If students don't find the starting point immediately at the end of the return course, have them surface to relocate the start point and to determine the accuracy of the navigation.

As with the surface compass swim, you'll make learning easier and more efficient by having students practice the skill on land as part of the briefing.

Open Water Dive 1

The goals of Open Water Dive 1 are:

1. To smooth the transition from the Confined Water Dive(s) to open water by eliminating the task loading of underwater exercises and introducing students to the environment.
2. To develop the practical application of the essential skills of diving — those used in making any dive, such as good judgment, buoyancy control, underwater awareness, ascents and descents, etc. — by having student divers make a dive much as they will after certification.
3. To enhance student motivation by making a dive that emphasizes the experience, adventure and fun of diving.

Overview

Briefing
Equipment preparation
Don and adjust equipment
Predive safety check
Entry
Buoyancy/weight check
Controlled descent (max 12 m/40 ft)
Underwater exploration
Ascent
Exit
Debrief and log dive

Performance Requirements:

During Open Water Dive 1, under instructor supervision, the student will:

1. **Listen to and participate in the briefing and dive planning session for the dive.**
2. **Prepare, and with a buddy don and adjust, scuba equipment with minimal instructor/staff assistance.**
3. **Enter the water in the manner determined during the briefing.**
4. **Adjust the weight so that the student floats at eye level with an empty BCD and holding a normal breath.**
5. **Descend in a controlled manner using a descent line or sloping bottom contour to provide control and reference to a depth not greater than 12 metres/40 feet.**
6. **Under direct instructor supervision, explore underwater to gain experience.**
7. **Exit the water as determined during dive planning.**
8. **Attend the instructor's debriefing.**
9. **Log the dive for instructor signature.**

Recommended Techniques for Meeting Performance Requirements

1. Predive acclimation. When feasible and appropriate, it's recommended that you have student divers acclimate to the water temperature and conditions before the first open water dive by having them enter the water with mask, fins, snorkel and exposure suit (no weights) and splash/play around a bit. The intent is to get them familiar with how the dive site feels compared to confined water and to have them experience the buoyancy characteristics of an exposure suit if not previously worn.
2. Briefing and dive planning. During the briefing, describe the dive from start to finish, including what student divers can expect to see, where and how they will enter, exit, descend, ascend, and so on. The idea is to give them a "script" of what will happen and what their parts are. At the same time, include students in the planning by sharing with them *why* you make certain decisions and recommendations. This is where they learn how to plan dives and evaluate conditions. Show them what you see when you evaluate conditions — keep in mind that what's obvious to you may not be obvious to a new diver. One technique is to ask questions that guide thinking such as, "What does the way those anchored boats face tell us?"
3. Assemble, adjust and don equipment.
4. Entry. Choose an entry appropriate for the environment. Especially for the first dive, the simpler the better to avoid task loading.
5. Buoyancy/weight check. Use the following steps to assist student divers in getting their weight set properly.
   - Help students estimate the amount of weight to use initially.
   - When possible, conduct buoyancy checks in water that is shallow enough to stand up in.
   - Have students, with their regulators in their mouths hold normal breaths, squat to eye level, draw their feet off the bottom and hang motionless. With proper weighting, students will float at eye level. Add or remove weight as needed and recheck buoyancy. Since you normally do this with full cylinders, add weight to offset the weight change from air use during the dive, usually about 2 kg/5 lbs with a single cylinder.
   - Have extra weights on hand, perhaps in a float if you're not near a dock or boat. You speed things by having students simply hold weights until you find the right amount, then make a single adjustment to the weight system.
   - If you conduct the buoyancy check in water too deep to stand up in, supervise the students more closely. Be sure you or an assistant remains close enough to students who may be overweighted to assure they don't sink too far with empty BCDs. You'll probably need to have students adjust their weight one at a time.
   - On occasion, you may have a student who has trouble staying down even though "properly" weighted. Apprehension (high lung volume) and other factors may cause this; keep a couple weights handy so you can adjust for this if necessary during the dive.
6. Controlled descent. Students need a control and something for reference during initial descents in open water. They may follow bottom contours, a line extending along the bottom from shore to the training area, the boat's anchor line or a vertical descent line. The reference provides orientation, and assists students to physically control their descent if they don't do so adequately with their BCDs.

   Before you begin the descent, it helps to remind students what you'll be doing underwater — sort of a mini rebriefing. Have

them perform the descent using the five points if they have completed Confined Water Dive Two. If not, you may demonstrate them before you descend:

- Signal intention to descend and wait for acknowledgment from buddy.
- Orient to some surface object for reference.
- Remove the snorkel and replace it with the regulator mouthpiece.
- Check the time/start stopwatch function.
- Completely deflate the BCD to begin the descent.

Remind students to descend feet-first, or at least with head above feet to remain oriented. Remind them to equalize early and often, and to stop the descent if they have trouble equalizing. The bottom will be a new experience; most confined water sites don't have problems with silt. Caution students to be careful not to kick up the bottom as they near it.

7. Demonstrate basic buoyancy control. During the first open water dive, the emphasis is on basic buoyancy control skills. Look for rudimentary control, and generally staying off the bottom. Given that student incidental bottom contact will more than likely happen, try to stay over insensitive bottom. You may prompt BCD use by signaling, demonstrating and when necessary, directly controlling student buoyancy.
8. Underwater exploration. This is the heart of Open Water Dive 1. Although to the experienced diver it is "just swimming around," the novice is learning and assimilating a great deal, such as buoyancy control, body attitude, buddy contact, communication, breathing and dozens of other underwater capabilities that experienced divers find second nature. The dive also plays an important role in student motivation and satisfaction by demonstrating the excitement, wonder and adventure diving offers. Be sure the dive accomplishes these purposes. Take time to point out local aquatic life, points of interest, small sights that beginners overlook. Show or signal what you're hearing as well as seeing. **This exploration must be under your direct supervision and cannot be delegated to a certified assistant.**
9. Ascent.
10. Exit. Choose an exit appropriate for the environment, the simpler the better.
11. Debriefing. Debrief students on their performances — what was good, what they may improve and how, and so on. Also, follow up on what you showed them during the exploration, explaining or adding facts that you couldn't describe underwater with signals. If students have completed Knowledge Development Section 4, you can include using the RDP to find their pressure group.
12. Log the dive for instructor signature. This will be the first time they log a dive, so provide guidance. Provide the site name, depth and other required information. Suggest helpful information to track, such as the type of exposure suit they're wearing, the temperature and the amount of weight they need.

Open Water Dive 2

The goals of Open Water Dive 2 are:

1. To continue student diver transition to open water.
2. To further the practical application of dive skills in the open water environment.
3. To further build student confidence, judgment and general diving ability.

*Dive Flexible Skill – recommended sequencing as shown, but may be conducted on any Open Water Dive at the instructor's discretion and based on logistics. See page 4-6 of this guide for details.

Note: Cramp Removal, Tired Diver Tow and Snorkel/Regulator Exchange must be completed prior to Scuba Diver certification.

Overview

Briefing
Equipment preparation
Don and adjust equipment
Predive safety check
Entry
Buoyancy/weight check
(Cramp removal self and buddy)*
(25 metre/yard tired diver tow)*
(Snorkel/regulator exchange)*
Controlled descent (maximum 12 metres/40 feet)
Buoyancy control — fin pivot, low pressure inflator
Partial and complete mask flood and clear
Regulator recovery and clearing
Alternate air source use stationary and AAS assisted ascent
Underwater exploration and buoyancy control
Ascent
Weight removal at the surface
Exit
Debrief and log dive

Performance Requirements:

During Open Water Dive 2, under instructor supervision, the student will:

1. **Listen to and participate in the briefing and dive planning session for the dive.**
2. **Prepare, and with a buddy don and adjust, scuba equipment with minimal instructor/staff assistance.**
3. **With a buddy, perform the predive safety check.**

4. **Enter the water in the manner determined during the briefing.**
5. **Adjust the weight so that the student floats at eye level with an empty BCD and holding a normal breath.**
6. **Using the five point method, descend in a controlled manner using a descent line or sloping bottom contour to provide control and reference to a depth not greater than 12 metres/40 feet.**
7. **Achieve neutral buoyancy by inflating the BCD (or dry suit if used) with the low pressure inflator.**
8. **Clear a mask that has been partially flooded.**
9. **Clear a mask that has been fully flooded.**
10. **Recover and clear a regulator at depth.**
11. **In a stationary position, secure and breathe from an alternate air source provided by another diver. Students alternate roles as donors and receivers.**
12. **Ascend properly using an alternate air source as either the donor or receiver and establish positive buoyancy at the surface.**
13. **Under direct instructor or certified assistant supervision, explore underwater to gain experience.**
14. **Using the five point method, ascend at a rate no faster than 18 metres/60 feet per minute while maintaining buddy contact.**
15. **Establish buoyancy at the surface by removing weights at the surface using the quick release mechanism of the weight system.**
16. **Exit the water as determined during dive planning.**
17. **Attend the instructor's debriefing.**
18. **Log the dive for instructor signature.**

Recommended Techniques for Meeting Performance Requirements

1. Briefing and dive planning. Continue including students in planning. If they've completed Knowledge Development Section Four, include RDP use in planning dive time limits.
2. Assemble, adjust and don equipment and perform a predive safety check. Students should be able to assemble their gear with little or no assistance; don't permit one buddy to assemble gear for another. Do encourage buddies to help each other don and adjust equipment. Have buddy teams perform the predive safety check, with you or your staff confirming the check.
3. Entry. Choose an entry appropriate for the environment.
4. Buoyancy/weight check. Redetermine weight if this dive is in a different environment or if students wear a different equipment configuration from the first dive. Otherwise, a quick recheck should be all that's necessary.
5. Five point controlled descent. Conduct as suggested in the Open Water Dive 1.
6. Neutral buoyancy/fin pivot, low pressure inflation. Student divers use low pressure inflation to fin pivot (or pivot on another body point if appropriate). During the briefing remind students that this differs little from their confined water dive practice, except they need to be cautious to avoid stirring up the bottom, and they may find they need to use more air due to wet suit compression at depth.
7. Mask clearing. Students clear a partially flooded mask *and* a fully flooded mask. You may combine

this into a single skill by having each student complete the partial flood and clear, signaling "Okay," then having the student complete the full flood and clear. The initial partial flood gives students the opportunity to acclimate to the water temperature, hoods, etc. that may differ from their Confined Water Dives.

8. Regulator recovery and clearing. Students recover and clear their second stages as they did during the confined water dives, with their choice of recovery and clearing methods. It's a good idea to have your alternate air source ready in case students have difficulty relocating their second stages.
9. Alternate air source use. During the briefing, have students refresh their confined water practice by going through the securing and positioning they'll be using with their buddies. This can be especially important with a referred student who practiced with a different configuration alternate air source. Be sure student divers know what is right side up for the alternates they'll use to avoid the wet breathing or flooded mask that upside down regulator use can cause.

   The most common alternate air source is the alternate second stage or "octopus," normally secured in plain view in the triangular area between the chin and the corners of the rib cages. Whether the donor breathes from the primary or the secondary regulator depends upon the regulator configuration and other factors. Generally, it is desirable for the donor to retain the primary regulator and provide the alternate, but alternate inflator regulators and other configurations have the donor give up the primary to the receiver and then switch to the alternate. The important point is that buddies know how each other's systems work.

   Have students begin the exercise with the standard out of air and share air signals. The receiver secures the alternate independently, except with configurations in which the donor gives up the primary second stage. In this case, the donor hands the primary to the receiver and switches to the alternate.

   After sufficient time to adjust, establish contact and get comfortable; the team stops the exercise and repeats, switching roles as donor and receiver. After again establishing contact and getting comfortable, the team ascends face-to-face or side-by-side as appropriate for the configuration, with the face-to-face, grasping right fore arms the most common. During the ascent, divers control their buoyancy to maintain a normal ascent rate. At the surface, the receiver inflates the BCD using oral inflation to simulate being out of air and unable to use the low pressure inflator.

   Instruct students to revert to using their own regulators if they experience any difficulties at any time. Be prepared to provide students with your alternate air source.

   Each student must perform this exercise as the receiver in the stationary position. The team needs only make one alternate air source ascent, but it's acceptable to make more than one ascent so each diver may also act as donor.
10. Underwater exploration ("tour"). Continues developing student underwater skill as described in Open Water Dive 1.
11. Five point ascent. The emphasis during ascent is on maintaining buoyancy control, maintaining a proper ascent rate and maintaining buddy contact. It's recommended that the ascent follow the bottom contour, line or other reference that helps student divers gauge and control their ascents.

    During the briefing, tell students that they will ascend using the five point method they practiced in the Confined Water Dives, though by the end of the dive you may need to remind them by signaling.

    - Signal "up" and get buddy agreement.
    - Check the time and depth.

- Hold up the BCD deflator to vent air during ascent.
- Extend the other hand overhead.
- Look up and swim up, turning for a clear view.

Emphasize that they should not ascend faster than 18 metres/60 feet per minute. If appropriate, you may have them pause at 5 metres/15 feet for a safety stop and/or to listen for boats and regain control of the ascent. After surfacing, have students inflate their BCDs before exchanging the regulator for snorkel, and signal "okay" to the boat or shore.

Because beginning divers often have trouble determining ascent rate, you can have them follow you to get a feel for the proper rate. Tell students to look at their surroundings, the reference line or other reference. As air in their BCDs expands during ascent, students will gain buoyancy. Signal them to release expanding air before buoyancy becomes excessive.

During your briefing, it may help to suggest how to control a runaway ascent. The simplest way is to lean back and flare out to create the maximum drag possible, which will slow the ascent. Simultaneously, vent air from the BCDs, remembering to breathe normally and/or make an aaahhhh sound.

12. Weight removal at the surface. This skill develops removing weights in an emergency. Student divers practice using the quick release mechanisms of their weight systems. Ideally, students remove and drop their weights, but this may not always be feasible. It is acceptable to remove the weights and hand them to you, an assistant, someone on a boat, etc. It's recognized that some weight systems release all the weights individually. For such systems, you may have students remove all but one or two weights before the exercise, making it possible for you or an assistant to catch or easily recover only those weights if dropped. *Be certain there are no divers below when conducting this skill to avoid accidental injury from dropped weights.*

    You may have students redon their weights if appropriate for the exit, but it may be easiest to have students exit with weights off.
13. Exit. Choose an exit appropriate for the environment.
14. Debriefing. Debrief students on their performances. If students have completed Knowledge Development Section 4, you can include using the RDP to find their pressure group.
15. Log the dive for instructor signature.

Open Water Dive 3

The goals of Open Water Dive 3 are:

1. To further the practical application of dive skills in the open water environment.
2. To further build student confidence, judgment and general dive ability.
3. To develop basic navigation skills with a compass.

*Dive Flexible Skill – recommended sequencing as shown, but may be conducted on any Open Water Dive at the instructor's discretion based on logistics. See page 4-6 of this guide for details.

Overview

Briefing

Equipment preparation

Don and adjust equipment

Predive safety check

Entry

Buoyancy/weight check

(50 metre/yard straight line surface swim

with compass)*

Free descent with reference to 6-9 metres/20-30 feet (max dive depth 18 metres/60 feet)

Buoyancy control – neutral buoyancy on bottom, fin pivot oral

Complete mask flood and clear

(CESA)*

Buddy breathing – stationary and ascent from 6-9 metres/20-30 feet (optional)

Underwater exploration

Ascent

(Remove and replace weight system at the surface)*

(Remove and replace scuba unit at the surface)*

Exit

Debrief and log dive

Performance Requirements:

During Open Water Dive 3, under instructor supervision, the student will:

1. Listen to and participate in the briefing and dive planning session for the dive.

2. **Prepare, and with a buddy don and adjust, scuba equipment with minimal instructor/staff assistance.**
3. **With a buddy, perform the predive safety check.**
4. **Enter the water in the manner determined during the briefing.**
5. **Adjust the weight so that the student floats at eye level with an empty BCD and holding a normal breath.**
6. **Using the five point method, descend in a controlled manner to 6-9 metres/20-30 feet using a visual reference only.**
7. **Achieve and maintain neutral buoyancy underwater by inflating the BCD orally.**
8. **Clear a mask that has been fully flooded.**
9. Buddy breathe in a stationary position (optional).
10. Perform a buddy-breathing ascent from a depth of 6-9metres/20-30 feet (optional).
11. **Explore underwater to gain experience.**
12. **Using the five point method, ascend at a rate no faster than 18 metres/60 feet per minute while maintaining buddy contact.**
13. **Exit the water as determined during dive planning.**
14. **Attend the instructor's debriefing.**
15. **Log the dive for instructor signature.**

Recommended Techniques for Meeting Performance Requirements

1. Briefing and dive planning. Continue including students in planning. This should include having them use the RDP in planning dive time limits.
2. Assemble, adjust and don equipment and predive safety check. Have buddy teams perform the predive safety check, with you or your staff confirming the check.
3. Entry. Choose an entry appropriate for the environment.
4. Buoyancy/weight check. Redetermine weight if this dive is in a different environment or if students wear a different equipment configuration from the previous dive.
5. Five point controlled descent with visual reference only. Student divers use the five point method and control their descent with their BCDs. Remind students to stay with their buddies, to equalize early and often, and to add air to their BCDs in small amounts frequently so they maintain, rather than reestablish proper buoyancy as they descend. They may use a line or other fixed reference as a visual reference. Advise students not to hold onto the line, unless they have a problem and need support.
6. Neutral buoyancy on bottom/fin pivot oral. Student divers should be demonstrating near-automatic buoyancy control, staying off the bottom, and being constantly aware of their buoyancy. Student divers fin pivot (or pivot on another body point if appropriate) by orally inflating their BCDs. During the briefing remind students that this differs little from their Confined Water Dive practice, except they need to be cautious to avoid stirring up the bottom, and they may find they need to use more air due to wet suit compression at depth.
7. Mask clearing. Students clear a fully flooded mask.
8. Buddy breathing (optional). Buddy breathing exercises demonstrate

control and confidence in the ability to share a single air source in the event of an emergency. Given the establishment of the alternate air source as mandatory equipment, the dive community no longer regards this a necessary skill for entry-level divers.

Review all procedures and signals during the briefing. You may want to have buddy teams rehearse during the briefing. You normally conduct buddy-breathing exercises in buddy teams. One technique that works well is for you to point to one buddy and give the out-of-air signal. That diver commences buddy breathing as the receiver, signaling "out of air" and "share air."

Remind students to be sure to exhale slowly and continuously (make an aaahhhh sound) when they have no regulator in their mouth. The normal practice is for each diver to take two breaths on each exchange. Have students demonstrate mastery first in a stationary position without leaving the bottom. You may then have buddies switch roles. After establishing a comfortable exchange rhythm, they ascend (from 6-9 metres/ 20-30 feet) buddy breathing all the way to the surface. Buddy breathing is a complex skill, don't expect students to adjust their BCDs during ascent. Remind them to look up between breaths during the ascent, to flare their legs and fins if it becomes necessary to slow the ascent, and to exhale at all times when the regulator is out of their mouth.

If you choose to include buddy breathing in your Open Water Diver training, be certain student divers have mastered it in confined water before attempting it during this dive. This may be an issue with a referred student who didn't practice it during the confined water dives.

9. Underwater exploration ("tour"). Continues developing student underwater skill as described in Open Water Dive 1. **This exploration may be conducted by a certified assistant at a ratio of 2 students to 1 assistant.**
10. Five point ascent.
11. Exit. Choose an exit appropriate for the environment.
12. Debriefing. Debrief students on their performances. This should include having students use the RDP to find their pressure group.
13. Log the dive for instructor signature.

Open Water Dive 4

The goals of Open Water Dive 4 are:

1. To further the practical application of dive skills in the open water environment to maximum depth of 18 metres/60 feet.
2. To further build student confidence, judgment and general dive ability.

*Dive Flexible Skill – recommended sequencing as shown, but may be conducted on any Open Water Dive at the instructor's discretion based on logistics.

Overview

Briefing

Equipment preparation

Don and adjust equipment

Predive safety check

Entry

Buoyancy/weight check

Free descent without reference no deeper than 18 metres/60 feet

Buoyancy control — hovering

Mask removal, replacement and clearing

(Underwater navigation with compass)*

Underwater exploration

Ascent

Exit

Debrief and log dive

Performance Requirements:

During Open Water Dive 4, under instructor supervision, the student will:

1. **Listen to and participate in the briefing and dive planning session for the dive.**
2. **Prepare, and with a buddy don and adjust, scuba equipment with minimal instructor/staff assistance.**
3. **With a buddy, perform the predive safety check.**
4. **Enter the water in the manner determined during the briefing.**
5. **Adjust the weight so that the student floats at eye level with an empty BCD and holding a normal breath.** If this adjustment is made with a full cylinder, add enough weight to compensate for air used during the dive (usually about 2 kg/5 lbs).
6. **Using the five point method, perform a descent with no visual reference to a depth no greater than 18 metres/60 feet.**

7. **Achieve neutral buoyancy and hover underwater in midwater using only buoyancy control and without swimming, sculling or using fins.**
8. **Remove, replace and clear the mask while underwater.**
9. **Explore underwater to gain experience.**
10. **Using the five point method, ascend at a rate no faster than 18 metres/60 feet per minute while maintaining buddy contact.**
11. **Exit the water as determined during dive planning.**
12. **Attend the instructor's debriefing.**
13. **Log the dive for instructor signature.**

Recommended Techniques for Meeting Performance Requirements

1. Briefing and dive planning. Continue including students in planning. This should include having them use the RDP in planning dive time limits. At this stage, student divers should be able to make the basic conditions evaluation and participate significantly in planning the dive.
2. Assemble, adjust and don equipment and predive safety check. Have buddy teams perform the predive safety check, with you or your staff confirming the check.
3. Entry. Choose an entry appropriate for the environment.
4. Buoyancy/weight check. Redetermine weight if this dive is in a different environment or if students wear a different equipment configuration from the previous dive.
5. Five point controlled descent without visual reference. Students now have several descent experiences and have a feel for buoyancy control. Brief students to use their depth gauges, how often they need to equalize, particles in the water, etc. to gauge and control their descent rate.

   One technique is to use a reference line, but have the buddy team face away from it. This gives a control method while meeting the performance requirement. Tell student divers that you will stay with them during the descent and they are setting the descent rate. This makes them control the rate rather than merely match yours.
6. Neutral buoyancy and hovering. Student divers perform this much as they do during the confined water dives. Ideally, do these near a line or other object they can use as a visual reference. Stay close enough to stop a student who begins to rise unaware or who is out of control.

   This exercise has no time limit because you're looking for *mastery*. Some divers can immediately establish a controlled hover; others may need to warm up a bit before they establish a controlled hover.
7. Mask removal, replacement and clearing. If using hoods, remind students to be sure they have the mask sealing against their faces (except latex dry suit hoods that masks are supposed to seal over).
8. Underwater exploration ("tour"). Continues developing student underwater skill as described in Open Water Dive 1. This exploration may be conducted by a certified assistant at a ratio of 2 students to 1 assistant.
9. Five point ascent.
10. Exit. Choose an exit appropriate for the environment.
11. Debriefing. Debrief students on their performances. This should include having students use the RDP to find their pressure group.
12. Log the dive for instructor signature.

Optional Skin Dive

The goals of Optional Skin Dive are:

1. To develop student skin diving skills.
2. To permit students to have fun and develop confidence in their ability to skin dive.

   This dive is entirely optional for certification and may be included and sequenced entirely at your discretion. A certified assistant may conduct this dive at your discretion.

Overview

- Briefing
- Equipment preparation
- Suiting up
- Equipment inspection
- Entry
- Buoyancy/weight check
- Surface swim
- Surface dives and underwater swimming
- Snorkel clear
- Underwater exploration
- Exit
- Debrief and log dive

Performance Requirements:

During Optional Skin Dive, under instructor, divemaster or assistant instructor supervision, the student will:

1. Listen to and participate in the briefing and dive planning session for the dive.
2. Prepare, and with a buddy don and adjust, skin diving equipment with minimal instructor/staff assistance.
3. With a buddy, inspect each other's equipment.
4. Enter the water in the manner determined during the briefing.
5. Adjust the weight so that the student is slightly positively buoyant.
6. Perform a surface swim using skin diving equipment, demonstrating proper descent and ascent techniques.
7. Clear water from the snorkel.
8. Exit the water as planned during the briefing.
9. Attend the debriefing.
10. Log the dive for signature.

Recommended Techniques for Meeting Performance Requirements

1. Briefing and dive planning. Include students in the planning. Emphasize that this will be a fun and relaxed "break" from the scuba dives.
2. Assemble, adjust and don equipment and equipment inspection. Have buddy teams gear up together and inspect each other's equipment.
3. Entry. Choose an entry appropriate for the environment.
4. Buoyancy/weight check. Skin divers weight themselves like scuba divers, but the weight required will not usually be the same as when using scuba equipment. Also, skin divers often want to be somewhat positively buoyant, so it is acceptable to use less weight than required to float at eye level with an empty BCD and holding a normal breath. Students who don't obtain positive buoyancy by wearing an exposure suit still need adequate positive buoyancy; snorkel vests may provide this.
5. Surface swim, descent and ascent techniques. Have buddies swim together, maintaining contact and swimming face down, using their snorkels. During the briefing, ask student divers to practice their head first surface dives, to ascend properly as they practiced during the Confined Water Dives, and to use the one-up, one-down technique for alternating dives with their buddies. Normally, you'll be able to assess performance by watching teams alternately as they snorkel.
6. Snorkel clearing. You'll usually see each student do this without specifically having to ask. If necessary, ask individual students to practice it for you.
7. Exit. Choose an exit appropriate for the local environment.
8. Debriefing. Debrief divers about their performances, what they saw, and other aspects of the dive that benefit learning.
9. Log the dive for signature.

Appendix

MAIN MENU

Table of Contents

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"Diving With The Wheel"

How To Use The Video During PADI Diver Courses

(Place this sheet with your course notes.)

When to use the video.

Open Water Diver Course — During Module 4. Begin tape at topic "VI. Getting Started" on page 2-39 in your "Open Water Diver Course Instructor Guide." You may decide to show the entire tape in Module 4, or you may reserve the multilevel planning segment for Module 5.

Continuing Education Courses — Anytime dive tables are reviewed.

Instructor materials needed.

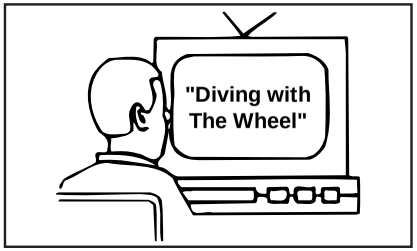
"Diving With The Wheel" Video, VCR, TV, Video Response Worksheet, Giant Wheel, "Open Water Diver Course Instructor Guide"

Student materials needed.

Wheel, Data Carrier, Video Response Worksheet, pencil

Step 1

Obtain a comfort level with the video — watch tape prior to using it for the first time in class.



Step 2

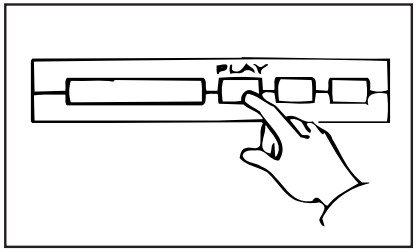
IMPORTANT: Read this to students prior to their viewing the tape.

a. **First five minutes of video is an overview — listen and watch only***
b. **Manipulate your Wheel ONLY when video is in pause.**
c. **Listen to and watch video very carefully.**
d. **Ask questions only when VCR is in pause.**

Note: The tape begins with a brief segment that quickly overviews how the Wheel works. This segment is designed to help students feel confident that The Wheel is easy to master. ***Do not allow students to manipulate their own Wheels during this introduction — have them watch the video.***

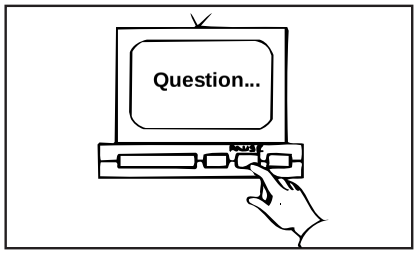
Step 3

Begin playing tape.



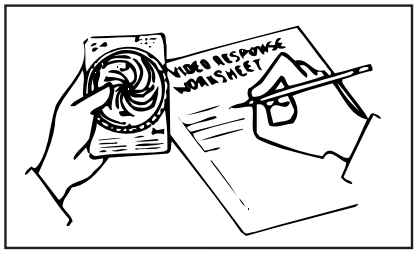
Step 4,

Pause tape when a sample question appears on screen.



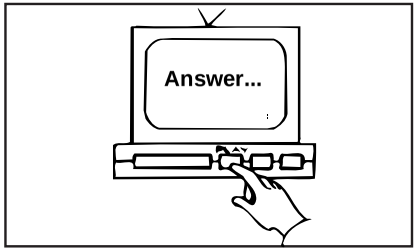
Step 5,

Have students find answer using ***their*** Wheels.



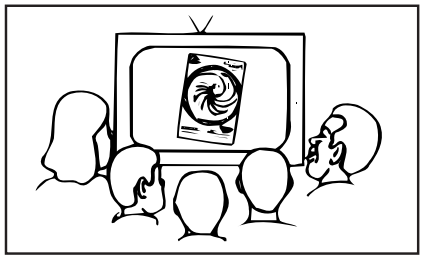
Step 6,

Begin tape again — view answer to question and explanation. ***Rewind tape or verbally review sample question if students experience difficulty.***



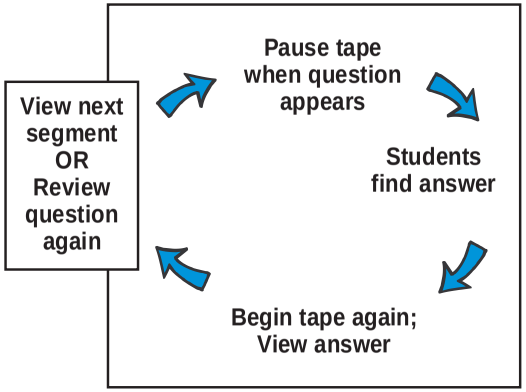
Step 7

View next segment.



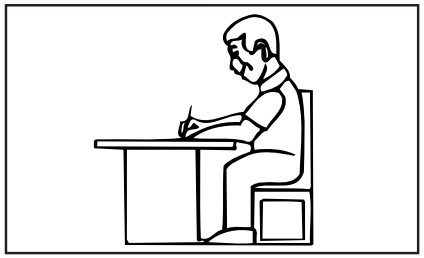
Step 8

Repeat steps 4-7.



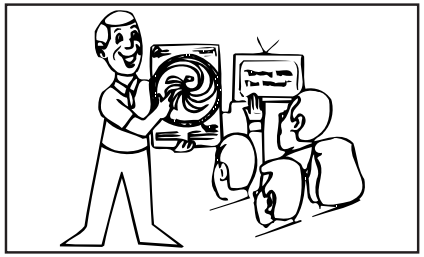
Step 9

When video ends, have students complete additional sample questions on Video Response Worksheet.



Step 10

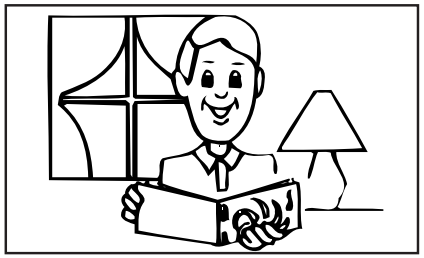
Review each sample question until all have been mastered by each student.



Step 11

Encourage self-study at home.

(Instructions For Use booklet)



Step 12

Evaluate student mastery.

(The following evaluation documents may be used to confirm and record student mastery of The Wheel: 1) Module Four Knowledge Review, *Open Water Diver Manual*; 2) Modular Scuba Course Quizzes and Exams; 3) Instructor Preassessment Exam; 4) Preassessment Inquiry, PADI Standardized Deep Diver Specialty Course Outline.)

Instructional Materials To Help You Teach The Wheel

Student Materials:

1. Open Water Diver Manual — with The Wheel (#70009)
2. The Encyclopedia of Recreational Diving (#70034)

Instructor Material:

1. PADI Instructor Manual (#70120)
2. Recreational Dive Planning...The Next Generation (#70170)
3. Specialty Course Instructor Outlines (#70250)
4. Modular Scuba Course Quizzes and Exams (#70023)

Visual Aids:

1. Modular Lesson Guide Slide Set (#60108)
2. Giant Wheel (#60052)
3. Giant Data Carrier (#70075)
4. “It’s About Time” video (#60076)

Order Toll Free 1-800-729-7234

Video Response Worksheet

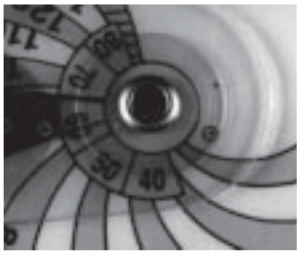
"Diving With the Wheel"

Directions:

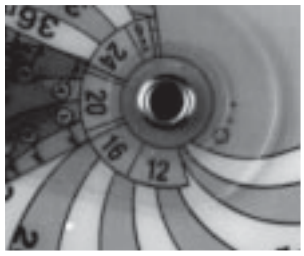
Watch the video carefully — do not manipulate your Wheel until instructed to do so. This program will periodically ask you to pause your VCR and answer sample exercises using your own Wheel. The sample exercises in the video are duplicated in this worksheet. For each exercise, place a check in the box next to your answer; once an answer is chosen, begin the video again to view the correct answer. If the answer you chose was incorrect, rewind the tape to review the previous segment again. Be certain you understand and solve each sample exercise before moving on to another segment.

1 Check The Alignment Of Your Wheel

Prior to using your Wheel, always check both sides for proper alignment. Remember the black dots have to fit inside the circle without touching the edges. If a dot touches the inside of the circle or cannot be placed inside a circle, the Wheel is out of alignment and must not be used.



Dots ouside of circle.



Circle with dot aligned.

PLEASE START THE VCR AGAIN

2 Planning A Single Depth Dive

What is the no-decompression limit (NDL) for a single 35-foot dive?

☐ a. 190 minutes ☐ c. 45 minutes
☐ b. 140 minutes ☐ d. 205 minutes

What is the no-decompression limit (NDL) for a single 67-foot dive?

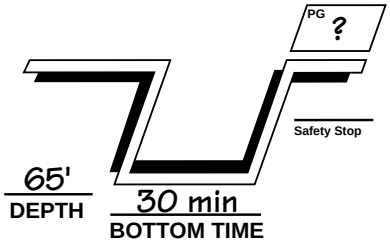
☐ a. 40 minutes ☐ c. 45 minutes
☐ b. 35 minutes ☐ d. 65 minutes

PLEASE START THE VCR AGAIN FOR ANSWERS

3 Finding Your Pressure Group After A Dive

What is your pressure group after a dive to 65 feet for 30 minutes?

☐ a. Pressure Group J ☐ b. Pressure Group L
☐ c. Pressure Group N ☐ d. Pressure Group P



PLEASE START THE VCR AGAIN FOR ANSWERS

4 Finding Your Pressure Group After A Surface Interval

You and your buddy finish your previous dive as P divers. What's your new pressure group after a 49-minute (:49) surface interval?

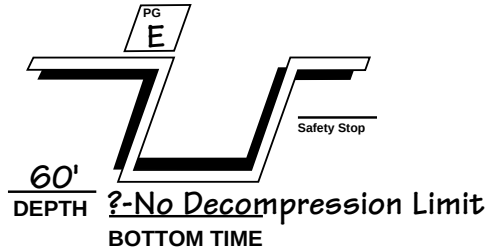
☐ a. Pressure Group F ☐ c. Pressure Group C
☐ b. Pressure Group H ☐ d. Pressure Group G

PLEASE START THE VCR AGAIN FOR ANSWERS

5 Find The No-Decompression Limit (NDL) For A Repetitive Dive

What is your no-decompression limit for a repetitive dive to 60 feet as an E diver?

☐ a.37 minutes ☐ c.38 minutes
☐ b.28 minutes ☐ d.40 minutes

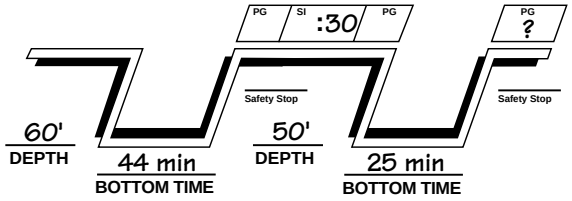


PLEASE START THE VCR AGAIN FOR ANSWERS

6 Finding Your Pressure Group At The End Of A Repetitive Dive

You are planning a series of two dives. The first is to a depth of 60 feet for 44 minutes. After a 30-minute (:30) surface interval, you plan to return to 50 feet for 25 minutes. What will your pressure group designation be at the end of the second dive?

☐ a. Pressure Group Q ☐ c. Pressure Group U
☐ b. Pressure Group S ☐ d. Pressure Group W

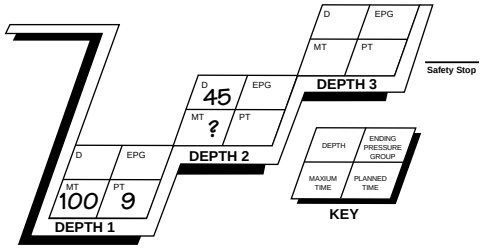


PLEASE START THE VCR AGAIN FOR ANSWERS

7 Planning Multilevel Dives

You are planning a multilevel dive, beginning at a depth of 100 feet. You plan to stay at 100 feet for nine minutes, then ascend to the 45-foot level. What is your new no-decompression limit at the 45-foot level?

☐ a. 55 minutes ☐ c. 30 minutes
☐ b. 49 minutes ☐ d. 68 minutes



PLEASE START THE VCR AGAIN FOR ANSWERS

When You've Finished Watching "Diving With The Wheel"...

Now it's time to see if you can solve a number of sample exercises on your own. These problems provide you with further practice using The Wheel, and help you verify that you are using it properly. With a pencil, use the Data Carrier that came with your Wheel to help you visualize each sample exercise. The answers are provided so you may check your work.

Make sure you can solve each problem correctly before you use The Wheel for diving. If you are unable to arrive at the correct answers, seek instruction from a certified scuba instructor before using The Wheel to plan or make actual open-water dives.

1. What is the no-decompression limit for a dive to 20 feet?
   ☐ a. 180 minutes ☐ c. 210 minutes
   ☐ b. 205 minutes ☐ d. 220 minutes

2. What is your pressure group designation after a dive to 56 feet for 24 minutes?
   ☐ a.Pressure Group J ☐ c.Pressure Group M
   ☐ b.Pressure Group I ☐ d.Pressure Group O

3. You surface from a dive as a pressure group G diver. What is your new pressure group after a 1-hour and 30-minute (1:30) surface interval?
   ☐ a.Pressure Group A ☐ c.Pressure Group C
   ☐ b.Pressure Group B ☐ d.Pressure Group D

4. After your surface interval, you are in pressure group E. You want to plan another dive, this time to 60 feet. What is your NDL for this dive?
   ☐ a.32 minutes ☐ c.38 minutes
   ☐ b.35 minutes ☐ d.40 minutes

5. You plan your first dive of the day to 60 feet for 40 minutes. Then you plan a 1-hour (1:00)surface interval, followed by another dive to 60 feet. What is your NDL for the second dive?
   ☐ a.30 minutes ☐ c.38 minutes
   ☐ b.36 minutes ☐ d.42 minutes

6. You are planning a series of three dives. The first is to a depth of 60 feet for 44 minutes. After a 30-minute (:30) surface interval, you plan to return to 50 feet for 25 minutes. You then plan a 48-minute (:48) surface interval followed by a dive to 40 feet for 25 minutes. What will your pressure group designation be at the end of the third dive?
   ☐ a.Pressure Group Q ☐ c.Pressure Group U
   ☐ b.Pressure Group S ☐ d.Pressure Group W

7. You plan a multilevel dive, beginning at a depth of 100 feet. You plan to stay at 100 feet for 9 minutes, then ascend to 45 feet for 30 minutes.
   ☐ a. According to the yellow multilevel boxes, can you make a multilevel dive to 100 feet, then ascend to the 45-foot level?
      ☐ Yes ☐ No
   ☐ b. What is your pressure group after 9 minutes at 100 feet?
      ☐ Pressure Group A ☐ Pressure Group F
      ☐ Pressure Group D ☐ Pressure Group H
   ☐ c. What is your new no-decompression limit at your next level (45 feet)?
      ☐ 65 minutes ☐ 72 minutes
      ☐ 68 minutes ☐ 75 minutes

8. You plan a multilevel dive, beginning at a depth of 120 feet. You plan to stay at 120 feet for 10 minutes, then ascend to 60 feet for 15 minutes. You then plan to ascend to 35 feet for 30 minutes. What will your pressure group be upon surfacing?
   ☐ a.Pressure Group S ☐ c.Pressure Group U
   ☐ b.Pressure Group T ☐ d.Pressure Group V

Answers:

1. b. 205 minutes
2. b. Pressure Group I;
3. b. Pressure Group B
4. c. 38 minutes
5. b. 36 minutes
6. a. Pressure Group Q
7. a. Yes
   b. Pressure Group D
   c. 68 minutes
8. b. Pressure Group T

Name _____ Date _____

Knowledge Review – Module One

Answer the following questions and bring this completed Knowledge Review with you to your next training session.

1. True or False. An object is neutrally buoyant when it displaces an amount of water less than its own weight.

   False

2. Explain why buoyancy control, both on the surface and underwater, is one of the most important skills you can master.

   On the surface: To conserve energy while resting or swimming.

   Underwater: To stay off the bottom and avoid crushing or damaging delicate aquatic life.

3. Fill in the blanks with the appropriate words: fresh water or salt water.

   "The same object would be more buoyant in salt water than it would be in fresh water."

4. True or False. "Because water is much denser than air, the pressure change for a given distance ascent or descent is significantly greater in water than in air."

   True

5. Complete the following chart for a sealed flexible bag, full of air at the surface.

Depth	Pressure	Volume	Density
0'	1 bar/ATM	1	x 1
10m/33'	2 bar/ATM	1/2	x 2
30m/99'	4 bar/ATM	1/4	x 4
40m/132'	5 bar/ATM	1/5	x 5

6. Circle the letter of the best definition for a *squeeze.*

   a. A condition that causes pain and discomfort when the pressure outside an air space of your body is less than the pressure inside an air space.

   (b.) A condition that causes pain and discomfort when the pressure inside an air space of your body is less than the pressure outside an air space.

7. Check each statement that describes a technique used to equalize air spaces during descent:

   ☑ a. Block your nose and attempt to gently blow through it.

   ☑ b. Swallow and wiggle the jaw from side to side.

   ☑ c. Block your nose and attempt to gently blow through it while swallowing and wiggling the jaw from side to side.

8. State how often you should equalize your air spaces during descent.

   Every few metre/feet, before discomfort is felt.

9. True or False. "If you feel discomfort in your ears while descending, continue downward until the discomfort is gone."

   False

10. State the most important rule in scuba diving.

    Breathe continuously and never, never hold your breath.

11. Circle the letter of the best definition for a reverse block.

    (a.) A condition that occurs when expanding air cannot escape from a body air space during ascent, causing pain and discomfort.

    b. A condition that occurs when expanding air escapes from a body air space during ascent, causing pain and discomfort.

12. Describe what action you should take if you feel discomfort during ascent due to air expansion, whether in your ears, sinuses, stomach, intestines or teeth.

    Slow or stop ascent, descend a metre/few feet and allow trapped air to work its way out.

13. When scuba diving, why must your nose be enclosed in the mask?

    To exhale into it and equalize.

14. Explain the best way to prevent water from entering your scuba tank.

    Never allow a tank to be completely emptied of air pressure.

15. Circle the appropriate answer. The most important feature for consideration when selecting a regulator is:

    a. The color b. The number of hoses it has (c.) Ease of breathing d. Size

Name _____ Date _____

Knowledge Review – Module Two

Answer the following questions and bring this completed Knowledge Review with you to your next training session.

1. Check one. "Underwater, objects appear 25 percent _____ and/or _____."

   ☐ a. smaller, further away ☑ b. larger, closer

2. Check one. Since it travels about four times faster in water than in air, you will have difficulty determining the origin of _____ underwater.

   ☐ a. light ☑ b. sound

3. Fill in the blank with the appropriate word: faster or slower.

   "Water conducts heat away from your body **faster** than air does."

4. Describe what you should do if you begin shivering continuously underwater.

   Get out of the water, dry off and seek warmth.

5. Of the procedures you can follow to compensate for the increased resistance of water while diving, check those listed here:

   ☑ a. Streamline yourself and your equipment. ☑ b. Avoid rapid, jerky movements.

   ☑ c. .Move slowly and steadily ☑ d. Pace yourself.

6. Check the statement that best describes the proper breathing pattern for diving.

   ☐ a. Consistently rapid and shallow. ☑ b. Consistently slow and deep.

7. It is easy to prevent overexertion while diving. Check the proper preventative measures listed here.

   ☑ a. Move slowly and avoid extended strenuous activity.

   ☐ b. Use your arms rather than your legs for propulsion underwater.

   ☑ c. Know your physical limits.

8. Explain what to do if you become overexerted while diving.

   a. Under water:

   Stop all activity, breathe deeply and rest. Hold onto an object for support if possible.

   b. At the surface:

   Establish buoyancy and stop moving. Rest and catch your breath. Once recovered: move at slower pace.

9. Check each statement that describes a technique used for airway control:

   ☑ a. Use your tongue as a splash guard by placing the tip on the roof of your mouth.

   ☑ b. Inhale slowly. ☐ c. Avoid rapid, jerky movement. ☑ d. Inhale cautiously.

10. Explain why it is important not to wear a tight-fitting hood.

    A hood that's too tight can cause changes in the heart rate due to compression of the arteries in the neck.

11. Check the appropriate answer. The most important feature of any weight system is:

    ☐ a. the size and shape of the weights. ☐ b. the ease of adjustment.

    ☑ c. a quick-release mechanism.

12. Check one. An alternate air source should be _____, so it can be quickly and easily identified by a diver needing the device.

    ☐ a. tucked under the weight belt ☑ b. conspicuously marked

13. Describe where you should attach an alternate air source to your body.

    In the triangular area between your mouth and the lower corners of your rib cage.

14. True or False. A dive knife is used as a tool (to measure, pry, dig, cut and pound), but is not intended to be, nor should be, used as a weapon.

    True

15. Identify the meaning of the standard hand signal illustrated here.

    ☐ a. OK? OK ☑ b. Distress, help ☐ c. Out-of-air

16. Explain how to check for proper weighting.

    You should float at eye level with an empty BCD and while holding a normal breath.

17. List and describe the steps of the predive safety check and explain when you should use this check.

    BWRAF – B-BCD, W-Weights, R-Releases, A-Air, F-Final ok. Should be done before each dive.

Name _____ Date _____

Knowledge Review – Module Three

Answer the following questions and bring this completed Knowledge Review with you to your next training session.

1. There are several factors that affect visibility underwater. Check those listed here.
   ☑ a. weather ☑ b. water movement ☐ c. ambient pressure ☑ d. suspended particles
2. True or False. "To avoid problems associated with diving in clear water, use an accurate depth gauge, refer to it frequently, and it is recommended that you use a line for ascents and descents."

   True
3. Explain what you should do if you find yourself caught in a current at the surface.

   Swim perpendicular to the current or establish buoyancy, signal for assistance and wait for help.
4. True or False. "You will find it easier to swim against a mild current along the bottom where it is generally weaker than on the surface."

   True
5. Check one. If a current is present, you should generally begin your dive:
   ☐ a. with the current. ☐ b. across the current. ☑ c. against the current.
6. Check one. Nearly all injuries from aquatic life are caused by _____action on the part of the animal.
   ☐ a. unpredictable ☐ b. unprovoked ☑ c. defensive
7. Describe what you should do if you spot an aggressive animal underwater.

   Remain still and calm on the bottom and watch what it does. Calmly move away from the area by swimming on the bottom and exit.
8. True or False. "For safety and enjoyment when diving in a new area or engaging in an new activity, be sure to obtain a proper orientation."

   True
9. A rip current can be recognized as a line of turbid, foamy water moving _____
   ☐ a. toward shore. ☑ b. seaward. ☐ c. parallel to shore.
10. Outline three ways to prevent or control most diving problems that occur at the surface.

    1. **Dive within my limitations.**
    2. **Relax while I dive.**
    3. **Maintain positive buoyancy at the surface.**

11. True or False. “The first step in assisting another diver with a problem at the surface is to talk to him, offering encouragement and persuading him to relax.”

    False

12. Arrange the five low-on-air/out-of-air emergency procedures in order of priority of 1 through 5.

    5 Buoyant emergency ascent

    3 Controlled emergency swimming ascent

    1 Normal ascent

    4 Buddy breathing ascent

    2 Alternate air source ascent

13. Check one. If you become entangled underwater, you should:

    ☐ a. Twist and turn to free yourself.

    ☑ b. Stop, think and then work slowly and calmly to free yourself.

14. True or False. “With an unconscious diver, the primary concern is to remove him from the water.”

    False

15. True or False. Once removed from the water, an unconscious diver should be administered oxygen if available.

    True

Name _____ Date _____

Knowledge Review – Module Four

Answer the following questions and bring this completed Knowledge Review with you to your next training session.

1. A detailed log book is the proof-of experience documentation typically requested in many diving situations. Check those listed here.

   ☑ a. for additional diver training ☐ b. by dive stores when buying diving equipment

   ☑ c. when diving at resorts or on boats

2. Explain how to prevent problems with contaminated air.

   Have tanks filled only with pure, dry, filtered compressed air from a reputable air station.

3. State the two ways divers prevent problems with oxygen.

   a. **Never fill a tank with pure oxygen**

   b. **Do not use enriched air or a cylinder marked for enriched air unless you are properly trained.**

4. Check each symptom related to nitrogen narcosis:

   ☑ a. impaired coordination ☑ b. foolish behavior ☐ c. joint and limb pain

5. Check one. To prevent nitrogen narcosis:

   ☐ a. skip breathe. ☐ b. equalize your air spaces early and often. ☑ c. avoid deep dives.

6. Check each symptom which may be related to decompression sickness:

   ☐ a. foolish behavior ☑ b. moderate tingling

   ☐ c. cherry-red lips ☑ d. weakness and prolonged fatigue

7. Outline the first aid procedure for assisting someone with decompression illness.

   Get the person into medical care. Prevent/treat for shock, administer oxygen, if necessary, CPR. Put diver in a left-side down position.

8. True or False. "When using either version of the Recreational Dive Planner or any dive computer, you must ascend at a rate that does not exceed 18 metres/60 feet per minute."

   True

9. Match the following by placing the correct letter in the blank.

   a. Maximum depth limit for Open Water Divers.

   c. Maximum depth limit for divers with training and experience beyond the Open Water Diver level.

   b. Maximum depth limit for divers with Deep Diver training.

   a. 18 metres/60 feet b. 40 metres/130 feet c. 30 metres/100 feet

10. According to the Recreational Dive Planner, the no-decompression limit for 18 metres/60 feet is:

    Metric – 56 minutes
    Imperial – 55 minutes.

11. What is your pressure group after a dive to 12 metres/42 feet for 24 minutes?

    Metric – D Pressure Group
    Imperial – F Pressure Group

12. After a dive, you are in pressure group K. What will your new pressure group be after a 34-minute surface interval?

    F Pressure Group

13. A diver in Pressure Group G plans a dive to 17 metres/56 feet. What is the maximum allowable bottom time according to the Recreational Dive Planner?

    34 min. Maximum Allowable Bottom Time

14. Indicate the final pressure group upon surfacing after the following series of dives.
    First dive: 16 metres/50 feet for 23 minutes; surface interval: 1:30.
    Second dive: 10 metres/35 feet for 46 minutes.

    Final Pressure Group = M

15. Indicate the final pressure group upon surfacing after the following series of dives.
    First dive: 18 metres/60 feet for 15 minutes; surface interval: 1:00.
    Second dive: 12 metres/40 feet for 30 minutes.

    Final Pressure Group = K

Name _____ Date _____

Knowledge Review – Module Five

Answer the following questions and bring this completed Knowledge Review with you to your next training session. (Answer all questions, regardless of which Recreational Dive Planner your are using — The Wheel or table version.)

1. Describe the three required situations in which a safety stop should be made.

   a. A dive has been to 30 metres/100 feet or deeper.

   b. Pressure group at end of dive is within three pressure groups of the no-decompression limit.

   c. A dive is made up to any limit on the Recreational Dive Planner.

2. Check one. "If you accidentally exceed a no-decompression limit or an adjusted no-decompression limit by no more than 5 minutes, you should slowly ascend at a rate not faster than 18 metres/60 feet per minute to 5 metres/15 feet and remain there for _____ minutes prior to surfacing. After reaching the surface, do not dive for at least _____ hours."

   ☑ a. 8 minutes, 6 hours ☐ b. 15 minutes, 24 hours

3. State the altitude above which the Recreational Dive Planners should not be used unless special procedures are followed.

   300 metres/1000 feet

4. True or False. "To be reasonably assured you remain symptom free from decompression sickness when flying in a commercial jet airliner after diving, wait 12 hours."

   True

5. Explain the procedure you must follow when planning a dive in cold water or under strenuous conditions using the Recreational Dive Planner.

   Plan the dive as though the depth were 4 metres/10 feet deeper than it actually is.

6. What is the minimum surface interval required between a dive to 18 metres/60 feet for 40 minutes followed by a dive to 14 metres/50 feet for 60 minutes?

   Metric – Minimum Surface Interval = 0:28 (table) 0:29 (Wheel)
   Imperial – Minimum Surface Interval = 1.12

7. What is the minimum surface interval required between a dive to 20 metres/70 feet for 29 minutes followed by a dive to 14 metres/50 feet for 39 minutes?

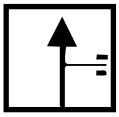
   Metric – Minimum Surface Interval = 0:00
   Imperial – Minimum Surface Interval = :04

8. With reference to the compass heading shown in Figure 1, select the figure letter that indicates a reciprocal heading.

Figure 1

A

B



C

Reciprocal heading is shown by the figure letter: B

9. What is the purpose of the PADI System of continuing education?

Continuing education courses let you:

1. Meet people.
2. Go places.
3. Do things.

10. What are the benefits of PADI Adventure Dives and the Advanced Open Water program?

1. Discover exciting new underwater activities.
2. Additional supervised experience.
3. Gain confidence.
4. Develop additional diving skills.
5. Have a chance to visit different dive locations.

11. State the purpose of PADI Discover Local Diving:

To provide a single, supervised open water experience to a new diving area.

12. When should you consider taking PADI Scuba Review?

If I go several months or longer without diving.

13. What is the relationship between Adventure Dives, Advanced Open Water course dives and Specialty Diver course dives?

Adventure Dives can be credited toward the Advanced Open Water Diver course and/or corresponding Specialty Diver course.

Outlines of PADI Open Water Diver Course Training Dives

Open Water Dive One

Briefing
Equipment preparation
Don and adjust equipment
Predive safety check
Entry
Buoyancy/weight check
Controlled descent (max. depth 12m/40ft)
Underwater exploration
Ascent
Exit
Debrief and log dive

Open Water Dive Two

Briefing
Equipment preparation
Don and adjust equipment
Predive safety check
Entry
Buoyancy/weight check
(Cramp removal, self and buddy)*
(25 metre/yard tired diver tow)*
(Snorkel/regulator exchange)*
Controlled descent (max. depth 12m/40ft)
Buoyance control – fin pivot, low pressure inflator
Partial and complete mask flood and clear
Regulator recovery and clearing
Alternate air source use stationary and AAS assisted ascent
Underwater exploration and buoyancy control
Ascent
Weight removal at surface
Exit
Debrief and log dive

Open Water Dive Three

Briefing
Equipment preparation
Don and adjust equipment
Predive safety check
Entry
Buoyancy/weight check
(50 metre/yard straight line surface swim with compass)*
Free descent with reference to 6-9m/20-30ft (max. depth 18m/60ft)
Buoyance control – neutral buoyancy on bottom, fin pivot oral
Complete mask flood and clear (CESA)*
Buddy breathing – stationary and ascent from 6-9m/20-30ft (optional)
Underwater exploration
Ascent
(Remove and replace weight system at surface)*
(Remove and replace scuba unit at surface)*
Exit
Debrief and log dive

Open Water Dive Four

Briefing
Equipment preparation
Don and adjust equipment
Predive safety check
Entry
Buoyancy/weight check
Free descent without reference no deeper than 18m/60ft
Buoyance control – hovering
Mask removal, replacement and clearing
(Underwater navigation with compass)*
Underwater exploration
Ascent
Exit
Debrief and log dive

Optional Skin Dive

Briefing
Equipment preparation
Suiting up
Equipment inspection
Entry
Buoyancy/weight check
Surface swim
Surface dives and underwater swimming
Displacement snorkel clear
Underwater exploration
Exit
Debrief and log dive

** Dive Flexible Skill – recommended sequencing as shown, but may be conducted on any Open Water Dive at the instructor's discretion and based on logistics.*
See page 4-6 of this guide for details.

Name _____ Class No. _____ Date _____
(Please Print)

OPEN WATER DIVER COURSE FINAL EXAM ANSWER KEY

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark **X** through your first answer.

Check One: Exam ■ A ■ B

	A	B	C	D
1.	☐	☐	☐	■
2.	☐	■	☐	☐
3.	■	☐	☐	☐
4.	☐	■	☐	☐
5.	☐	■	☐	☐
6.	☐	☐	■	☐
7.	☐	☐	☐	■
8.	☐	☐	■	☐
9.	■	☐	☐	☐
10.	☐	☐	☐	■
11.	☐	☐	■	☐
12.	a 1	b 4	c 5	d 7
	e 3			
13.	☐	☐	■	☐
14.	☐	■	☐	☐
15.	☐	■	☐	■
16.	☐	☐	☐	■
17.	■	☐	☐	☐
18.	■	☐	☐	☐
19.	☐	☐	■	☐

Exam A – "B" is correct. Exam B – "D" is correct.

	A	B	C	D
20.	Stop			
21.	Something is wrong			
22.	OK. OK?			
23.	Help. Distress.			
24.	OK. OK?			
25.	Out of Air			
26.	Low on Air			
27.	Buddy Breathe or Share Air			
28.	☐	■	☐	☐
29.	☐	☐	☐	■
30.	☐	☐	■	☐
31.	☐	☐	☐	■
32.	■	☐	☐	☐
33.	**4**	**2**	**3**	**5** **1**
34.	☐	☐	☐	■
35.	☐	☐	☐	■
36.	☐	☐	■	☐
37.	■	☐	☐	☐
38.	☐	■	☐	☐
39.	☐	☐	☐	■

	A	B	C	D
40.	☐	☐	■	☐
41.	■	☐	☐	☐
42.	☐	☐	☐	■
43.	☐	☐	☐	■
44.	☐	☐	■	☐
45.	☐	■	☐	☐
46.	☐	■	☐	☐
47.	■	☐	☐	☐
48.	☐	☐	☐	■
49.	☐	■	☐	☐
50.	■	☐	☐	☐

Total Correct _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

Student Signature _____ Date _____

Name _____ Class No. _____

OPEN WATER DIVER COURSE QUIZZES ANSWER KEY

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark **X** through your first answer.

QUIZ - ONE ■ A ■ B

Date _____

	A	B	C	D
1.	☐	■	☐	☐
2.	■	☐	☐	☐
3.	☐	☐	■	☐
4.	☐	■	☐	☐
5.	■	☐	☐	☐
6.	☐	☐	■	☐
7.	☐	■	☐	☐
8.	☐	☐	☐	■
9.	■	☐	☐	☐
10.	☐	■	☐	☐

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

QUIZ - TWO ■ A ■ B

Date _____

	A	B	C	D
1.	☐	■	☐	☐
2.	■	☐	☐	☐
3.	☐	☐	■	☐
4.	☐	☐	☐	■
5.	☐	☐	☐	■
6.	■	☐	☐	☐
7.	☐	■	☐	☐
8.	☐	☐	☐	■
9.	■	☐	☐	☐
10.	☐	☐	■	☐

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

QUIZ - THREE ■ A ■ B

Date _____

	A	B	C	D	E
1.	☐	☐	■	☐	
2.	☐	☐	☐	■	
3.	☐	■	☐	☐	
4.	☐	☐	■	☐	
5.	☐	■	☐	☐	
6.	■	☐	☐	☐	
7.	■	☐	☐	☐	
8.	☐	■	☐	☐	
9.	☐	☐	■	☐	
10.	**5**	**1**	**3**	**2**	**4**

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

QUIZ - FOUR ■ A ■ B

Date _____

	A	B	C	D
1.	■	☐	☐	☐
2.	☐	☐	☐	■
3.	☐	■	☐	☐
4.	■	☐	☐	☐
5.	☐	☐	☐	■
6.	☐	☐	■	☐
7.	☐	☐	■	☐
8.	☐	■	☐	☐
9.	☐	☐	☐	■
10.	■	☐	☐	☐

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

Name _____ Class No. _____ Date _____
(Please Print)

PLANNING MULTILEVEL DIVES – ANSWER KEY

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark **X** through your first answer.

	A	B	C	D
1.	☐	■	☐	☐

	1	2	3	4
2A.	■ Yes		☐ No	
2B.	■	☐	☐	☐
2C.	☐	☐	■	☐
2D.	☐	■	☐	☐
2E.	■	☐	☐	☐

	A	B	C	D
3.	■	☐	☐	☐
4.	☐	☐	☐	■

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

Name _____ Class No. _____ Date _____
(Please Print)

PLANNING MULTILEVEL DIVES – ANSWER SHEET

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark **X** through your first answer.

	A	B	C	D
1.	☐	☐	☐	☐

	1	2	3	4
2A.	☐ Yes		☐ No	
2B.	☐	☐	☐	☐
2C.	☐	☐	☐	☐
2D.	☐	☐	☐	☐
2E.	☐	☐	☐	☐

	A	B	C	D
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

Name _____ Class No. _____ Date _____
(Please Print)

OPEN WATER DIVER COURSE FINAL EXAM ANSWER SHEET

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark **X** through your first answer.

Check One: Exam ☐ A ☐ B

	A	B	C	D
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	☐	☐	☐	☐
11.	☐	☐	☐	☐
12.	a __	b __	c __	d __
	e __			
13.	☐	☐	☐	☐
14.	☐	☐	☐	☐
15.	☐	☐	☐	☐
16.	☐	☐	☐	☐
17.	☐	☐	☐	☐
18.	☐	☐	☐	☐
19.	☐	☐	☐	☐

	A	B	C	D
20.	_____			
21.	_____			
22.	_____			
23.	_____			
24.	_____			
25.	_____			
26.	_____			
27.	_____			
28.	☐	☐	☐	☐
29.	☐	☐	☐	☐
30.	☐	☐	☐	☐
31.	☐	☐	☐	☐
32.	☐	☐	☐	☐
33.	☐	☐	☐	☐
34.	☐	☐	☐	☐
35.	☐	☐	☐	☐
36.	☐	☐	☐	☐
37.	☐	☐	☐	☐
38.	☐	☐	☐	☐
39.	☐	☐	☐	☐

	A	B	C	D
40.	☐	☐	☐	☐
41.	☐	☐	☐	☐
42.	☐	☐	☐	☐
43.	☐	☐	☐	☐
44.	☐	☐	☐	☐
45.	☐	☐	☐	☐
46.	☐	☐	☐	☐
47.	☐	☐	☐	☐
48.	☐	☐	☐	☐
49.	☐	☐	☐	☐
50.	☐	☐	☐	☐

Total Correct _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

Student Signature _____ Date _____

Name _____ Class No. _____

OPEN WATER DIVER COURSE QUIZZES ANSWER SHEET

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark **X** through your first answer.

QUIZ - ONE ☐ **A** ☐ **B**

Date _____

	A	B	C	D
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	☐	☐	☐	☐

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

QUIZ - TWO ☐ **A** ☐ **B**

Date _____

	A	B	C	D
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	☐	☐	☐	☐

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

QUIZ - THREE ☐ **A** ☐ **B**

Date _____

	A	B	C	D
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	___	___	___	___	___

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

QUIZ - FOUR ☐ **A** ☐ **B**

Date _____

	A	B	C	D
1.	☐	☐	☐	☐
2.	☐	☐	☐	☐
3.	☐	☐	☐	☐
4.	☐	☐	☐	☐
5.	☐	☐	☐	☐
6.	☐	☐	☐	☐
7.	☐	☐	☐	☐
8.	☐	☐	☐	☐
9.	☐	☐	☐	☐
10.	☐	☐	☐	☐

Score _____

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____

PADI Open Water Diver Course Record and Referral Form

Student Name _____ Birth Date _____ Day/Month/Year

Mailing address _____ Sex ☐ M ☐ F

City _____ State/Province _____

Country _____ Zip/Postal Code _____

Phone Home (____) _____ Business (____) _____

Fax (____) _____ Email _____

All PADI Instructors who initial this document must complete an identification section below.

PADI Instructor _____ Signature _____

PADI No. _____ Dive Center/Resort No. _____ Date _____ Day/Month/Year

Phone No. (____) _____ Fax No. (____) _____

Email Address _____

PADI Instructor _____ Signature _____

PADI No. _____ Dive Center/Resort No. _____ Date _____ Day/Month/Year

Phone No. (____) _____ Fax No. (____) _____

Email Address _____

Note: Attach additional sheet for other PADI Instructor information if necessary.

When referring a PADI Scuba Diver/Open Water Diver student:

a. Fill in the diver and PADI Instructor information and note appropriate areas of training completed.
b. Attach a copy of the diver's PADI Medical Statement to this form.
c. Advise the diver of the need for a photo for certification card processing.
d. Encourage the diver to complete training as soon as possible and explain that this form is only valid for one year from the last training module completion date.

A. Confined Water Dives

	Date Completed Day/Month/Year	Instructor ** Initials	PADI #
CW 1*	___/___/___	_____	#_____
CW 2	___/___/___	_____	#_____
CW 3	___/___/___	_____	#_____
CW 4	___/___/___	_____	#_____
CW 5	___/___/___	_____	#_____

Watermanship Assessment

	Date Completed Day/Month/Year	Instructor ** Initials	PADI #
200 metre/yard Swim	___/___/___	_____	#_____
10 Minute Survival Float	___/___/___	_____	#_____

*DS with all CW Dive 1 skills = DSD Waterskills Development Session = Open Water Diver CW Dive 1

(Note: If all Confined Water Dives and Watermanship Assessment have been completed by one instructor, only one signature required.)

All Confined Water Dives listed above and the Watermanship Assessment have been completed.

Instructor Signature _____ PADI #_____ Date ___/___/___

****I certify that this student has satisfactorily completed this skill/module/dive as outlined in the PADI *Instructor Manual*. I am a PADI Instructor renewed in Teaching status for the current year.**

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B. Knowledge Development

	Date Completed Day/Month/Year	Passed Quiz/Exam	Viewed Open Water Video / CD-ROM	Instructor** Initials	PADI #
Mod 1	___/___/___	_____	☐ ☐	_____	#_____
Mod 2	___/___/___	_____	☐ ☐	_____	#_____
Mod 3	___/___/___	_____	☐ ☐	_____	#_____
Mod 4	___/___/___	_____	☐ ☐	_____	#_____
Mod 5	___/___/___	_____	☐ ☐	_____	#_____

(Note: If all above Knowledge Development sessions have been completed by one instructor, only one signature required)

All Knowledge Development sessions listed above have been completed, Quizzes/Exams passed.

Instructor Signature _____ #_____ Date ___/___/___

Dive Flexible Skills

These skills may be completed during any Open Water Training Dive.

	Completed on	Instructor** Initials	PADI#
1. Cramp Removal	Dive #____	_____	#_____
2. Tired Diver Tow	Dive #____	_____	#_____
3. Surface Swim with Compass	Dive #____	_____	#_____
4. Snorkel/Regulator Exchange	Dive #____	_____	#_____
5. Remove /Replace Scuba (surface)	Dive #____	_____	#_____
6. Remove/Replace Weights (surface)	Dive #____	_____	#_____
7. CESA (Dive 2, 3 or 4)	Dive #____	_____	#_____
8. UW Compass Navigation	Dive #____	_____	#_____

(Note: If all above Dive Flexible Skills have been completed by one instructor, only one signature is required)

All Dive Flexible Skills listed above have been completed.

Instructor Signature _____ #_____ Date ___/___/___

C. Open Water Dives

	Date Completed Day/Month/Year	Instructor ** Initials	PADI #		Date Completed Day/Month/Year	Instructor ** Initials	PADI #
Dive 1	___/___/___	_____	#_____	Dive 3	___/___/___	_____	#_____
Dive 2	___/___/___	_____	#_____	Dive 4	___/___/___	_____	#_____

Student Statement: I understand the training requirements for this course and have successfully completed all certification requirements. I am adequately prepared to dive in areas and under conditions similar to those in which I was trained. I realize that additional training is recommended for participation in specialty diving activities, in other geographical areas, and after periods of inactivity that exceed six months. I agree to abide by PADI's Standard Safe Diving Practices.

Student Signature _____ Date ___/___/___

All requirements for certification as a **PADI Scuba Diver** have been met (completion of Knowledge Development sessions 1, 2, 3 Confined Water Dives 1, 2, 3 Open Water Dives 1, 2).

Instructor Signature _____ #_____ Date ___/___/___

All requirements for certification as a **PADI Open Water Diver** have been met.

Instructor Signature _____ #_____ Date ___/___/___

Important Points for the Diver and Instructor

To the Diver

1. Make advance logistical and financial arrangements with a PADI Dive Center, PADI Resort or PADI Instructor to complete your training. Verify that the PADI Instructor(s) who will complete your training is in Teaching status.
2. Take this form, along with a copy of your completed PADI Medical Statement and a photograph to the PADI Dive Center, PADI Resort or PADI Instructor completing your training.
3. This referral form is valid for one year after the last training module completion date, however you should complete your training as soon as possible.
4. Retain this form until you have completed all required training sessions.
5. The PADI Instructor(s) continuing your training will preassess your skills and knowledge and review anything that may be unclear.
6. Upon completion of all required open water dives, you and the PADI Instructor will complete a Positive Identification Card (PIC) envelope. This envelope must be submitted to PADI along with your photo to obtain a certification card.

NOTE: After certification, you'll want to continue your diving adventures. Visit your initial PADI Dive Center, PADI Resort or PADI Instructor and ask about participating in a Discover Local Diving experience or another PADI Course.

To the Referring PADI Instructor(s)

1. Fill in the requested information on this form, including the diver's name and address and your contact information. Also, fill in the appropriate areas of training completed before referring the diver.
2. Attach a copy of the diver's PADI Medical Statement to this form. Also advise the diver of the need for a photo for certification card processing.
3. Give the diver the entire form. If possible, assist the diver in making arrangements with a PADI Dive Center, PADI Resort or PADI Instructor for completing training as additional local requirements may apply. Keep a photocopy for your records.
4. Encourage the diver to complete the training as soon as possible. Advise the diver that the form is only valid for one year after the last training module completion date.

To the Receiving PADI Instructor(s)

1. Preassess the diver's knowledge and skills. Be certain that the diver is adequately prepared to continue training.
2. A diver may be referred between any academic module, confined water dive or between Open Water Dives 1-4.
3. Upon completion of each component, initial and date this form in the appropriate area. The diver retains the referral form until the completion of all certification requirements. Retain a photocopy of this form for your records.
4. If you conduct Oper Water Dive 4, you are the certifying instructor. Complete and submit a PADI Positive Identification Card (PIC) envelope to PADI for processing. Retain a copy of the completed referral form for your records and forward a copy to the original instructor for his records.

QUESTIONS – About how to use the form? Call PADI.

The Scuba Diver Statement

The PADI Scuba Diver rating allows you to gain experience under direct professional supervision. This agreement defines the limitations of your pre-entry level certification and describes the diving practices necessary for your comfort and safety.

I, _____, understand that as a PADI Scuba Diver, I should:

1. Dive under the direct inwater supervision of a PADI Divemaster, Assistant Instructor or Instructor. Listen carefully to dive briefings and respect the advice of those supervising my dive activities. Adhere to the buddy system on every dive.
2. Dive in conditions better than or similar to those in which I was trained. This includes limiting maximum dive depth to 12 metres/40 feet, or receiving additional instruction before diving deeper.
3. Maintain a reasonable fitness level for diving and dive within personal limitations. Avoid overexertion while diving and not dive under the influence of alcohol or drugs.
4. Obtain air fills and dive equipment only from a reputable source, such as a PADI Dive Center or Resort, to avoid contaminated air. Check that the cylinder used is not marked for enriched air (nitrox).
5. Maintain proper buoyancy while diving. Adjust weight for neutral buoyancy at the surface with no air in the BCD and take into account buoyancy changes due to air use during the dive. Establish positive buoyancy by ditching the weight belt and/or inflating the BCD when in distress on the surface.
6. Continue dive education to ensure appropriate training and experience before exceeding the limits of the PADI Scuba Diver rating. Review skills under supervision in a controlled environment after periods of diving inactivity.
7. Breathe properly for diving. Never breath hold or skip breathe when using compressed air.
8. Ascend at a rate of 18 metres/60 feet per minute or slower from every dive and make a safety stop at the end of every dive.
9. Use complete, properly fitting, well-maintained and familiar scuba equipment. Consult a dive professional for advice about and orientation to any unfamiliar equipment.
10. Know and obey local laws and regulations relevant to recreational diving.
11. Understand that I may upgrade to Open Water Diver in order to dive without professional supervision anytime after my Scuba Diver certification date.
12. Understand that deviating from safe diving practices will increase the risk of decompression illness, other injury or death and recognize that for safety and well being PADI Scuba Divers should abide by these recommendations and seek additional information or advice before diving in unfamiliar situations.

Preregistration and Team Teaching Tracking Form
Open Water Diver Course

Academics

	Date Completed	Instructor Name and Number	Initials Instructor*	Initials Student	Viewed Open Water AV/Video
Module 1	M/D/Y	Print Name / Instructor No.			☐
Module 2	M/D/Y	Print Name / Instructor No.			☐
Module 3	M/D/Y	Print Name / Instructor No.			☐
Module 4	M/D/Y	Print Name / Instructor No.			☐
Module 5	M/D/Y	Print Name / Instructor No.			☐

Confined Water

	Date Completed	Instructor Name and Number	Initials Instructor*	Initials Student
Module 1	M/D/Y	Print Name / Instructor No.		
Module 2	M/D/Y	Print Name / Instructor No.		
Module 3	M/D/Y	Print Name / Instructor No.		
Module 4	M/D/Y	Print Name / Instructor No.		
Module 5	M/D/Y	Print Name / Instructor No.		

Open Water

	Date Completed	Instructor Name and Number	Initials Instructor*	Initials Student
Dive 1	M/D/Y	Print Name / Instructor No.		
Dive 2	M/D/Y	Print Name / Instructor No.		
Dive 3	M/D/Y	Print Name / Instructor No.		
Dive 4	M/D/Y	Print Name / Instructor No.		
Dive 5	M/D/Y	Print Name / Instructor No.	(see below)	

For Dive 5 Instructor: I certify that this person has been trained to a proficiency level acceptable for PADI certification and has completed all requirements, including open water training.

_____
Dive 5 Instructor Signature

Watermanship Assessment

200 Yard/183 Metre Swim

_____ By _____
M/D/Y

10 Minute Survival Float

_____ By _____
M/D/Y

Important

Name of Instructor on Preregistration PIC Envelope (if different than Instructor conducting Open Water Dive 5):

_____
Print Name / Instructor No.

*Instructor initials indicate student has met all performance objectives for module.

(Place In PADI Student Record File)

Product No. 007DT (7/93)

STANDARD SAFE DIVING PRACTICES STATEMENT OF UNDERSTANDING

Please read carefully before signing.

This is a statement in which you are informed of the established safe diving practices for skin and scuba diving. These practices have been compiled for your review and acknowledgment and are intended to increase your comfort and safety in diving. Your signature on this statement is required as proof that you are aware of these safe diving practices. Read and discuss the statement prior to signing it. If you are a minor, this form must also be signed by a parent or guardian.

I, _____,understand that as a diver I should:
(Print Name)

1. Maintain good mental and physical fitness for diving. Avoid being under the influence of alcohol or dangerous drugs when diving. Keep proficient in diving skills, striving to increase them through continuing education and reviewing them in controlled conditions after a period of diving inactivity.
2. Be familiar with my dive sites. If not, obtain a formal diving orientation from a knowledgeable, local source. If diving conditions are worse than those in which I am experienced, postpone diving or select an alternate site with better conditions. Engage only in diving activities consistent with my training and experience. Do not engage in cave or technical diving unless specifically trained to do so.
3. Use complete, well-maintained, reliable equipment with which I am familiar; and inspect it for correct fit and function prior to each dive. Deny use of my equipment to uncertified divers. Always have a buoyancy control device and submersible pressure gauge when scuba diving. Recognize the desirability of an alternate air source and a low-pressure buoyancy control inflation system.
4. Listen carefully to dive briefings and directions and respect the advice of those supervising my diving activities. Recognize that additional training is required for participation in specialty diving activities, in other geographic areas and after periods of inactivity that exceed six months.
5. Adhere to the buddy system throughout every dive. Plan dives – including communications, procedures for reuniting in case of separation, and emergency procedures – with my buddy.
6. Be proficient in dive table usage. Make all dives no decompression dives and allow a margin of safety. Have a means to monitor depth and time underwater. Limit maximum depth to my level of training and experience. Ascend at a rate of not more than 18 metres/60 feet per minute. Be a SAFE diver – **S**lowly **A**scend **F**rom **E**very dive. Make a safety stop as an added precaution, usually at 5 metres/15 feet for three minutes or longer.
7. Maintain proper buoyancy. Adjust weighting at the surface for neutral buoyancy with no air in my buoyancy control device. Maintain neutral buoyancy while underwater. Be buoyant for surface swimming and resting. Have weights clear for easy removal, and establish buoyancy when in distress while diving.
8. Breathe properly for diving. Never breath-hold or skip-breathe when breathing compressed air, and avoid excessive hyperventilation when breath-hold diving. Avoid overexertion while in and underwater and dive within my limitations.
9. Use a boat, float, or other surface support station, whenever feasible.
10. Know and obey local dive laws and regulations, including fish and game and dive flag laws.

I have read the above statements and have had any questions answered to my satisfaction. I understand the importance and purposes of these established practices. I recognize they are for my own safety and well-being, and that failure to adhere to them can place me in jeopardy when diving.

_____ _____
Participant's Signature Date (Day/Month/Year)

_____ _____
Signature of Parent or Guardian (where applicable) Date (Day/Month/Year)

PRODUCT NO. 10060 (Rev.11/01) Version 1.3pdf

THE PADI SCUBA DIVER STATEMENT

The PADI Scuba Diver rating allows you to gain experience under direct professional supervision. This agreement defines the limitations of your pre-entry level certification and describes the diving practices necessary for your comfort and safety.

I, _____, understand that as a PADI Scuba Diver, I should:
(Print Name)

1. Dive under the direct inwater supervision of a PADI Divemaster, Assistant Instructor or Instructor. Listen carefully to dive briefings and respect the advice of those supervising my dive activities. Adhere to the buddy system on every dive.
2. Dive in conditions better than or similar to those in which I was trained. This includes limiting maximum dive depth to 12 metres/40 feet, or receiving additional instruction before diving deeper.
3. Maintain a reasonable fitness level for diving and dive within personal limitations. Avoid overexertion while diving and not dive under the influence of alcohol or drugs.
4. Obtain air fills and dive equipment only from a reputable source, such as a PADI Dive Center or Resort, to avoid contaminated air. Check that the cylinder used is not marked for enriched air (nitrox).
5. Maintain proper buoyancy while diving. Adjust weight for neutral buoyancy at the surface with no air in the BCD and take into account buoyancy changes due to air use during the dive. Establish positive buoyancy by ditching the weight belt and/or inflating the BCD when in distress on the surface.
6. Continue dive education to ensure appropriate training and experience before exceeding the limits of the PADI Scuba Diver rating. Review skills under supervision in a controlled environment after periods of diving inactivity.
7. Breathe properly for diving. Never breath hold or skip breathe when using compressed air.
8. Ascend at a rate of 18 metres/60 feet per minute or slower from every dive and make a safety stop at the end of every dive.
9. Use complete, properly fitting, well-maintained and familiar scuba equipment. Consult a dive professional for advice about and orientation to any unfamiliar equipment.
10. Know and obey local laws and regulations relevant to recreational diving.
11. Understand that I may upgrade to Open Water Diver to dive without professional supervision anytime after my PADI Scuba Diver certification date.
12. Understand that deviating from safe diving practices will increase the risk of decompression illness, other injury or death and recognize that for safety and well being PADI Scuba Divers should abide by these recommendations and seek additional information or advice before diving in unfamiliar situations.

I have read the above statements and have had any questions answered to my satisfaction.
I understand the importance and purposes of these established practices. I recognize they are for my own safety and well being, and that failure to adhere to them can place me in jeopardy when diving.

_____ _____
Participant's Signature Date (Day/Month/Year)

_____ _____
Signature of Parent or Guardian (where applicable) Date (Day/Month/Year)

PRODUCT NO. 10062 (10/02) Version 1.1pdf

PADI
padi.com

Name (Please Print) _____ Date _____

Open Water Diver Course Quizzes 1-4 Answer Sheet

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark X through your first answer.

Quiz 1 A☐ B☐

1. A☐ B☐ C☐ D☐
2. A☐ B☐ C☐ D☐
3. A☐ B☐ C☐ D☐
4. A☐ B☐ C☐ D☐
5. A☐ B☐ C☐ D☐
6. A☐ B☐ C☐ D☐
7. A☐ B☐ C☐ D☐
8. A☐ B☐ C☐ D☐
9. A☐ B☐ C☐ D☐
10. A☐ B☐ C☐ D☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
Day / Month /Year

Quiz 2 A☐ B☐

1. A☐ B☐ C☐ D☐
2. A☐ B☐ C☐ D☐
3. A☐ B☐ C☐ D☐
4. A☐ B☐ C☐ D☐
5. A☐ B☐ C☐ D☐
6. A☐ B☐ C☐ D☐
7. A☐ B☐ C☐ D☐
8. A☐ B☐ C☐ D☐
9. A☐ B☐ C☐ D☐
10. A☐ B☐ C☐ D☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
Day / Month /Year

Quiz 3 A☐ B☐

1. A☐ B☐ C☐ D☐
2. A☐ B☐ C☐ D☐
3. A☐ B☐ C☐ D☐
4. A☐ B☐ C☐ D☐
5. A☐ B☐ C☐ D☐
6. A☐ B☐ C☐ D☐
7. A☐ B☐ C☐ D☐
8. A☐ B☐ C☐ D☐
9. Place options in the correct order.

6
— — — — — —

10. A☐ B☐ C☐ D☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
Day / Month /Year

Quiz 4 A☐ B☐

1. A☐ B☐ C☐ D☐
2. A☐ B☐ C☐ D☐
3. A☐ B☐ C☐ D☐
4. A☐ B☐ C☐ D☐
5. A☐ B☐ C☐ D☐
6. A☐ B☐ C☐ D☐
7. A☐ B☐ C☐ D☐
8. A☐ B☐ C☐ D☐
9. A☐ B☐ C☐ D☐
10. A☐ B☐ C☐ D☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
Day / Month /Year

Product No. 70024 Ver. 3.0 09/02 pdf

USE ONLY WITH OPEN WATER QUIZZES AND EXAM VERSION 3.0

Name (Please Print) _____ Date _____

Open Water Diver Course Final Exam Answer Sheet

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark X through your first answer.

Exam A☐ B☐

1.	A ☐	B ☐	C ☐	D ☐
2.	A ☐	B ☐	C ☐	D ☐
3.	A ☐	B ☐	C ☐	D ☐
4.	A ☐	B ☐	C ☐	D ☐
5.	A ☐	B ☐	C ☐	D ☐
6.	A ☐	B ☐	C ☐	D ☐
7.	A ☐	B ☐	C ☐	D ☐
8.	A ☐	B ☐	C ☐	D ☐
9.	A ☐	B ☐	C ☐	D ☐
10.	A ☐	B ☐	C ☐	D ☐
11.	A ☐	B ☐	C ☐	D ☐

12. Identify each regulator part.

Number _____

Number _____

Number _____

Number _____

Number _____

Number 6 (Example)

13.	A ☐	B ☐	C ☐	D ☐
14.	A ☐	B ☐	C ☐	D ☐
15.	A ☐	B ☐	C ☐	D ☐
16.	A ☐	B ☐	C ☐	D ☐
17.	A ☐	B ☐	C ☐	D ☐
18.	A ☐	B ☐	C ☐	D ☐
19.	A ☐	B ☐	C ☐	D ☐
20.	A ☐	B ☐	C ☐	D ☐
21.	A ☐	B ☐	C ☐	D ☐
22.	A ☐	B ☐	C ☐	D ☐
23.	A ☐	B ☐	C ☐	D ☐
24.	A ☐	B ☐	C ☐	D ☐
25.	A ☐	B ☐	C ☐	D ☐
26.	A ☐	B ☐	C ☐	D ☐
27.	A ☐	B ☐	C ☐	D ☐
28.	A ☐	B ☐	C ☐	D ☐
29.	A ☐	B ☐	C ☐	D ☐
30.	A ☐	B ☐	C ☐	D ☐
31.	A ☐	B ☐	C ☐	D ☐
32.	A ☐	B ☐	C ☐	D ☐
33.	A ☐	B ☐	C ☐	D ☐
34.	A ☐	B ☐	C ☐	D ☐

35. Place options in the correct order.

Number _____

Number _____

Number 6 (Example)

Number _____

Number _____

Number _____

36.	A ☐	B ☐	C ☐	D ☐
37.	A ☐	B ☐	C ☐	D ☐
38.	A ☐	B ☐	C ☐	D ☐
39.	A ☐	B ☐	C ☐	D ☐
40.	A ☐	B ☐	C ☐	D ☐
41.	A ☐	B ☐	C ☐	D ☐
42.	A ☐	B ☐	C ☐	D ☐
43.	A ☐	B ☐	C ☐	D ☐
44.	A ☐	B ☐	C ☐	D ☐
45.	A ☐	B ☐	C ☐	D ☐
46.	A ☐	B ☐	C ☐	D ☐
47.	A ☐	B ☐	C ☐	D ☐
48.	A ☐	B ☐	C ☐	D ☐
49.	A ☐	B ☐	C ☐	D ☐
50.	A ☐	B ☐	C ☐	D ☐

I reviewed and understand the questions I have missed. _____ _____
Signature Day / Month /Year

Version 3.0 pdf **USE ONLY WITH OPEN WATER QUIZZES AND EXAM VERSION 3.0**

Name (Please Print) _____ Date _____

Planning Multilevel Dives Answer Sheet

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark **X** through your first answer.

1.	**A** ☐	**B** ☐	**C** ☐	**D** ☐
2.1.	**A** ☐	**B** ☐	**C** ☐	**D** ☐
2.2.	**A** ☐	**B** ☐	**C** ☐	**D** ☐
2.3.	**A** ☐	**B** ☐	**C** ☐	**D** ☐
2.4.	**A** ☐	**B** ☐	**C** ☐	**D** ☐
2.5.	**A** ☐	**B** ☐	**C** ☐	**D** ☐
3.	**A** ☐	**B** ☐	**C** ☐	**D** ☐
4.	**A** ☐	**B** ☐	**C** ☐	**D** ☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
Day / Month / Year

Name (Please Print) _____ Date _____

Open Water Diver Course Quizzes 1-4 Answer Key

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark X through your first answer.

Quiz 1 A☐ B☐

1.	A ☐	B ☐	C ■	D ☐
2.	A ■	B ☐	C ☐	D ☐
3.	A ☐	B ☐	C ■	D ☐
4.	A ☐	B ■	C ☐	D ☐
5.	A ☐	B ☐	C ■	D ☐
6.	A ☐	B ☐	C ☐	D ■
7.	A ☐	B ■	C ☐	D ☐
8.	A ■	B ☐	C ☐	D ☐
9.	A ☐	B ■	C ☐	D ☐
10.	A ☐	B ☐	C ☐	D ■

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
Day / Month /Year

Quiz 2 A☐ B☐

1.	A ☐	B ■	C ☐	D ☐
2.	A ■	B ☐	C ☐	D ☐
3.	A ☐	B ☐	C ■	D ☐
4.	A ☐	B ☐	C ☐	D ■
5.	A ☐	B ☐	C ☐	D ■
6.	A ■	B ☐	C ☐	D ☐
7.	A ☐	B ■	C ☐	D ☐
8.	A ☐	B ☐	C ☐	D ■
9.	A ☐	B ☐	C ☐	D ■
10.	A ☐	B ☐	C ■	D ☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
Day / Month /Year

Quiz 3 A☐ B☐

1.	A ☐	B ■	C ☐	D ☐
2.	A ☐	B ☐	C ■	D ☐
3.	A ☐	B ☐	C ☐	D ■
4.	A ☐	B ■	C ☐	D ☐
5.	A ☐	B ☐	C ■	D ☐
6.	A ☐	B ☐	C ☐	D ■
7.	A ■	B ☐	C ☐	D ☐
8.	A ■	B ☐	C ☐	D ☐

9. Place options in the correct order.

5 1 6 2 4 3

10. A ☐ B ☐ C ■ D ☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
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Date _____
Day / Month /Year

Quiz 4 A☐ B☐

1.	A ■	B ☐	C ☐	D ☐
2.	A ☐	B ☐	C ☐	D ■
3.	A ☐	B ■	C ☐	D ☐
4.	A ■	B ☐	C ☐	D ☐
5.	A ☐	B ☐	C ☐	D ■
6.	A ☐	B ☐	C ■	D ☐
7.	A ☐	B ☐	C ■	D ☐
8.	A ☐	B ■	C ☐	D ☐
9.	A ☐	B ☐	C ☐	D ■
10.	A ■	B ☐	C ☐	D ☐

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

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Open Water Diver Course Final Exam Answer Key

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark X through your first answer.

Exam A☐ B☐

1.	A ☐	B ☐	C ☐	D ■
2.	A ☐	B ■	C ☐	D ☐
3.	A ■	B ☐	C ☐	D ☐
4.	A ☐	B ☐	C ■	D ☐
5.	A ☐	B ☐	C ■	D ☐
6.	A ☐	B ■	C ☐	D ☐
7.	A ☐	B ☐	C ☐	D ■
8.	A ☐	B ■	C ☐	D ☐
9.	A ■	B ☐	C ☐	D ☐
10.	A ☐	B ☐	C ☐	D ■
11.	A ☐	B ☐	C ■	D ☐
12.	Identify each regulator part.			
	Number 1			
	Number 5			
	Number 4			
	Number 3			
	Number 2			
	Number 6 (Example)			
13.	A ■	B ☐	C ☐	D ☐
14.	A ☐	B ☐	C ☐	D ■
15.	A ☐	B ☐	C ■	D ☐
16.	A ☐	B ■	C ☐	D ☐
17.	A ■	B ☐	C ☐	D ☐
18.	A ☐	B ☐	C ■	D ☐
19.	A ■	B ☐	C ☐	D ☐
20.	A ☐	B ■	C ☐	D ☐
21.	A ☐	B ☐	C ■	D ☐
22.	A ☐	B ☐	C ■	D ☐
23.	A ■	B ☐	C ☐	D ☐
24.	A ☐	B ☐	C ☐	D ■
25.	A ☐	B ■	C ☐	D ☐
26.	A ☐	B ■	C ☐	D ☐
27.	A ☐	B ■	C ☐	D ☐
28.	A ☐	B ☐	C ☐	D ■
29.	A ☐	B ☐	C ■	D ☐
30.	A ■	B ☐	C ☐	D ☐
31.	A ☐	B ☐	C ☐	D ■
32.	A ☐	B ☐	C ☐	D ■
33.	A ■	B ☐	C ☐	D ☐
34.	A ☐	B ☐	C ■	D ☐
35.	Place options in the correct order.			
	Number 4			
	Number 2			
	Number 6 (Example)			
	Number 3			
	Number 5			
	Number 1			
36.	A ☐	B ☐	C ☐	D ■
37.	A ☐	B ☐	C ☐	D ■
38.	A ■	B ☐	C ☐	D ☐
39.	A ☐	B ■	C ☐	D ☐
40.	A ☐	B ☐	C ■	D ☐
41.	A ☐	B ■	C ☐	D ☐
42.	A ☐	B ■	C ☐	D ☐
43.	A ■	B ☐	C ☐	D ☐
44.	A ☐	B ■	C ☐	D ☐
45.	A ☐	B ■	C ☐	D ☐
46.	A ■	B ☐	C ☐	D ☐
47.	A ■	B ☐	C ☐	D ☐
48.	A ☐	B ☐	C ☐	D ■
49.	A ☐	B ☐	C ■	D ☐
50.	A ☐	B ☐	C ☐	D ■

I reviewed and understand the questions I have missed. _____ _____

Signature Day / Month /Year

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Planning Multilevel Dives Answer Key

Directions: Upon making your answer choice, COMPLETELY fill in the space ☐ below the proper letter. If a mistake is made, erase your selection or place a dark X through your first answer.

1.	**A** ☐	**B** ■	**C** ☐	**D** ☐
2.1.	**A** ■	**B** ☐	**C** ☐	**D** ☐
2.2.	**A** ■	**B** ☐	**C** ☐	**D** ☐
2.3.	**A** ☐	**B** ☐	**C** ■	**D** ☐
2.4.	**A** ☐	**B** ■	**C** ☐	**D** ☐
2.5.	**A** ■	**B** ☐	**C** ☐	**D** ☐
3.	**A** ■	**B** ☐	**C** ☐	**D** ☐
4.	**A** ☐	**B** ☐	**C** ☐	**D** ■

STUDENT STATEMENT: I have had explained to me and I understand the questions I have missed.

_____
Student Signature

Date _____
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